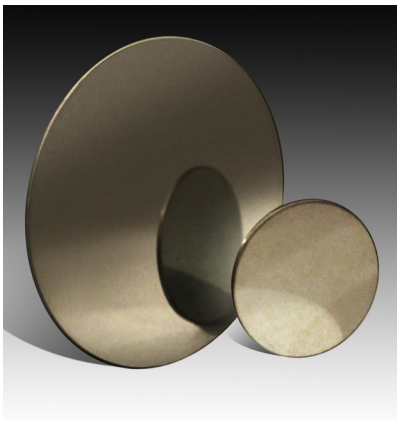


INFRARED NEUTRAL DENSITY FILTERS



Optimizing Detection for Infrared Applications

- Provides attenuation with greater linearity over a wide spectral range
- Delivers superior infrared beam conformity
- Wide selection of transmissivities and filter dimensions

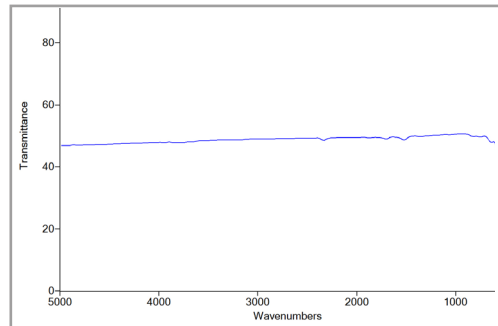
The Spectral Systems Infrared Neutral Density Filters are metallic-coated neutral density (ND) filters which obtain their optical density from a metal alloy coating on a substrate determined by the wavelength region of interest. Unlike the all-dielectric or absorption type, the metallic type ND filter employs a combination of absorption and reflection to reduce the intensity of light. And unlike screen type devices, our ND filters provide a consistent light intensity over the full beam area.

Neutral Density Filters are often used to reduce the intensity of the infrared (IR) beam for highly sensitive detectors preserving linearity and improving photometric accuracy. ND Filters are also ideal for evaluating the performance of optical systems and components within a controlled experiment. ND Filters are designed to reduce transmission evenly across a portion of the spectrum by absorbing or reflecting the portion of the light that is not being transmitted.

Please contact us for other requirements.

SPECIFICATIONS

Filter Thickness	1.0 ± 0.2mm
Diameter Tolerance	±0.2mm
Min. Clear Aperture	90% of outside dimension
Substrate Material	Germanium
Optical Flatness	3-5 waves per inch
Optical Parallelism	10 arc minutes or better
Spectral Range	5500 to 400 cm ⁻¹
Surface Quality	80/50 per MIL-0-13830B
Coating Quality	80/50 per MIL-0-13830B
Coating Adherence	Per MIL-M13508C
Humidity	Per Mil-STD-810F



FT-IR Spectrum of 50% Neutral Density Filter

ORDERING INFORMATION Germanium Infrared Neutral Density Filters

DESCRIPTION	MINIMUM TRANSMISSION	PART NO
25mm dia, OD=0.3	50%	FIL-940-1001
50mm dia, OD=0.3	50%	FIL-940-1002
25mm dia, OD=0.5	31.6%	FIL-940-1003
50mm dia, OD=0.5	31.6%	FIL-940-1004
25mm dia, OD=0.6	25%	FIL-940-1005
50mm dia, OD=0.6	25%	FIL-940-1006
25mm dia, OD=0.7	20%	FIL-940-1007
50mm dia, OD=0.7	20%	FIL-940-1008
25mm dia, OD=0.8	15.8%	FIL-940-1009
50mm dia, OD=0.8	15.8%	FIL-940-1010
25mm dia, OD=0.9	12.6%	FIL-940-1011
50mm dia, OD=0.9	12.6%	FIL-940-1012
25mm dia, OD=1.0	10%	FIL-940-1013
50mm dia, OD=1.0	10%	FIL-940-1014
25mm dia, OD=1.3	5%	FIL-940-1015
50mm dia, OD=1.3	5%	FIL-940-1016
25mm dia, OD=1.5	3.2%	FIL-940-1017
50mm dia, OD=1.5	3.2%	FIL 940-1018
25mm dia, OD=2.0	1%	FIL-940-1019
50mm dia, OD=2.0	1%	FIL-940-1020
25mm dia, OD=2.5	0.32%	FIL-940-1021
50mm dia, OD=2.5	0.32%	FIL-940-1022
25mm dia, OD=3.0	0.1%	FIL-940-1023
50mm dia, OD=3.0	0.1%	FIL-940-1024

Notes: OD refers to optical density from which transmissivity may be calculated.