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## 1.3 OD, 12.5mm Dia., IR Neutral Density Filter



Infrared (IR) Neutral Density (ND) Filters

Stock **#12-013** **1 In Stock**

⊖ 1 ⊕ €420<sup>00</sup>

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ⓘ Prices shown are exclusive of VAT/local taxes

### Product Downloads

#### General

Neutral Density Filter **Type:**

#### Physical & Mechanical Properties

12.50 ±0.2 **Diameter (mm):**

1.00 ±0.2 **Thickness (mm):**

**Parallelism (arcmin):**

<10

Clear Aperture (%):

90

## Optical Properties

Optical Density OD (Average):

1.3

Substrate:

Germanium (Ge)

Coating:

Metallic Based ND

Surface Quality:

80-50

Transmission (%):

5.0

Transmission Tolerance (%):

±1.3

Blocking Wavelength Range (nm):

2000 - 14,000

Wavelength Range (µm):

2 - 14

Surface Flatness (P-V):

3 - 5λ

## Regulatory Compliance

RoHS 2015:

Compliant

Certificate of Conformance:

[View](#)

REACH 241:

Compliant

## Product Details

- Spectrally Flat from 2µm to 14µm
- Precision Germanium Substrate
- **Due to material supply chain disruptions with germanium, there may be increased lead times and price changes on our germanium products. For more information, please contact our customer service team.**

Infrared (IR) Neutral Density (ND) Filters feature excellent linearity over a wide spectral band of 2µm to 14µm. Ideal for thermal and medical imaging, the filters are available in a variety of densities and 2 size options. Attenuation is achieved by a metal alloy coating, which employs a combination of absorption and reflection to achieve the stated transmittance value. Infrared (IR) Neutral Density (ND) Filters feature a germanium substrate and are available in 12.5, 25, and 50mm diameters with varying transmissions and optical densities. All 5 optical densities are available as part of our Neutral Density Filter Kits. The kits are ideal for integration with our filter wheels.

Please contact our [Applications Engineering Department](#) to discuss custom size and density options.

## Technical Information



## Special Handling

### Germanium Optics Handling and Cleaning Guidelines

Germanium optics require special handling and cleaning procedures. Always wear gloves during handling to prevent contamination, and wash hands afterward. Avoid contact between Germanium dust and the eyes, skin, or clothing. When not in use, store optics sealed and covered at temperatures between 20°C and 25°C. Do not expose them to temperatures exceeding 100°C when in use.

#### Handling Guidelines

- Always wear [gloves](#) to prevent damage from skin oils.
- If Germanium dust is present, take the following precautions:
  - Wear safety glasses to protect eyes.
  - Use a dust mask or face mask to avoid inhalation.
  - Wear [gloves](#) to prevent skin contact.
- Maintain storage temperature between 20°C and 25°C with humidity below 30%.
- Wrap Germanium optics in a [lens cloth](#) or [pouch](#) and seal in a [container](#) when not in use.
- Germanium is brittle and heavy—always place it on soft surfaces and avoid dropping it.

#### Approved Cleaning Solvents

- Ethanol
- Isopropyl Alcohol

- Methanol
- Reagent-Grade Acetone
- Liquid CO<sub>2</sub>
- [Shop Now](#)

## Compatible Mounts

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