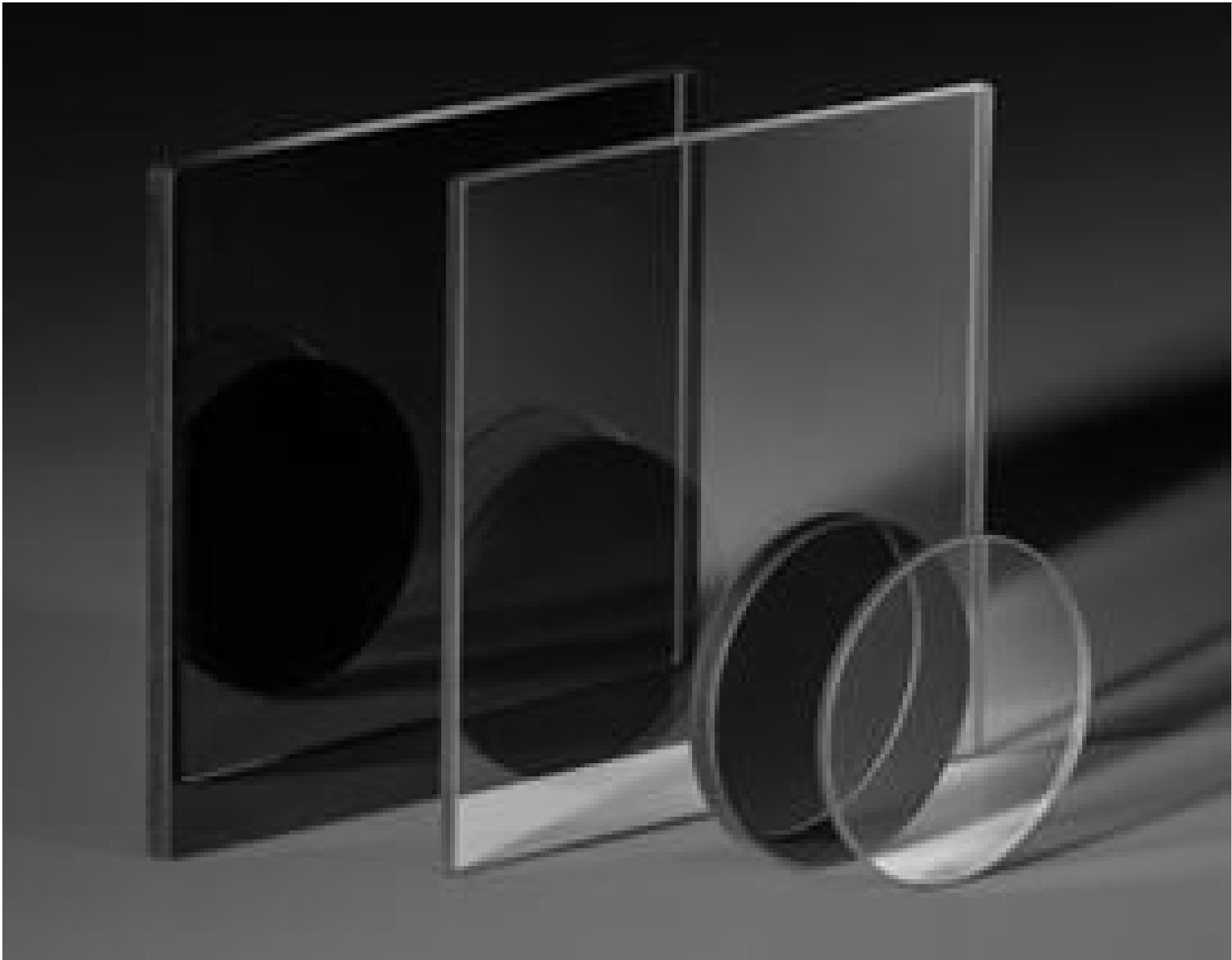


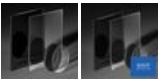
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# SCHOTT NG9, 50mm Sq., 1mm Thick, Absorptive ND Filter

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SCHOTT NG Gray Glass Neutral Density (ND) Filters



Stock **#14-098** 9 In Stock

-

1

+

€98<sup>50</sup>

ADD TO CART

| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-10       | €98,50 each                   |
| Qty 11-49      | €87,00 each                   |
| Need More?     | <a href="#">Request Quote</a> |

ⓘ Prices shown are exclusive of VAT/local taxes

Product Downloads

General

Type:

Neutral Density Filter

Physical & Mechanical Properties

Dimensions (mm):

|             |                             |
|-------------|-----------------------------|
| 50.0 x 50.0 |                             |
| 50.00       | Length (mm):                |
| 1.00 ±0.1   | Thickness (mm):             |
| 50.00       | Width (mm):                 |
| ≤3          | Parallelism (arcmin):       |
| ±0.2        | Dimensional Tolerance (mm): |

Optical Properties

|            |                                        |
|------------|----------------------------------------|
| 1.42       | Optical Density OD (Average):          |
| SCHOTT NG9 | Glass/Filter Number:                   |
| Uncoated   | Coating:                               |
| 1.51       | Index of Refraction (n <sub>d</sub> ): |
| 60–40      | Surface Quality:                       |
| 3.8        | Transmission (%):                      |
| (nominal)  | Transmission Tolerance (%):            |
| (nominal)  | Optical Density Tolerance (%):         |

Material Properties

|     |                                  |
|-----|----------------------------------|
| 470 | Transformation Temperature (°C): |
|-----|----------------------------------|

Regulatory Compliance

|           |                             |
|-----------|-----------------------------|
| Compliant | RoHS 2015:                  |
| View      | Certificate of Conformance: |
| Compliant | Reach 247:                  |

## Product Details

- Tightly Controlled Thickness Specifications
- Standard Thicknesses of 1, 2, and 3mm
- Even Light Attenuation in the Visible Spectrum
- NG1, NG3, NG4, NG5, NG9 and NG11 Glass Types Available
- [Precision SCHOTT NG Glass Filters](#) Also Available

SCHOTT NG Gray Glass Neutral Density (ND) Filters feature nearly constant transmittance in the visible spectrum, attenuating light through absorption. The filters are available in 6 materials, each with a thickness of 1, 2, or 3mm. Filters can be stacked to achieve custom optical densities. SCHOTT NG Gray Glass Neutral Density (ND) Filters are used in a variety of machine vision, [factory automation](#), and analytical instrumentation applications. Custom sizes from 5 to 160mm are available upon request; for more information, visit our [Colored Glass Filter Manufacturing](#) capabilities webpage. [SCHOTT NG Absorptive Neutral Density \(ND\) Filters](#) with precision optical density and transmission values are also available.

While SCHOTT NG Gray Glass Neutral Density (ND) Filters will provide consistent transmission values from 400 - 700nm, variations in filter lot manufacturing may lead to variations in transmission from filter to filter. Please see the table in the Technical Information tab for acceptable transmission variations for each glass type and thickness.

### Filter Simulation Software

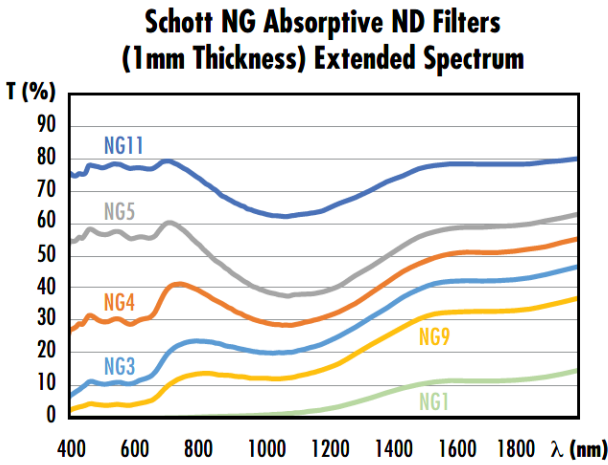
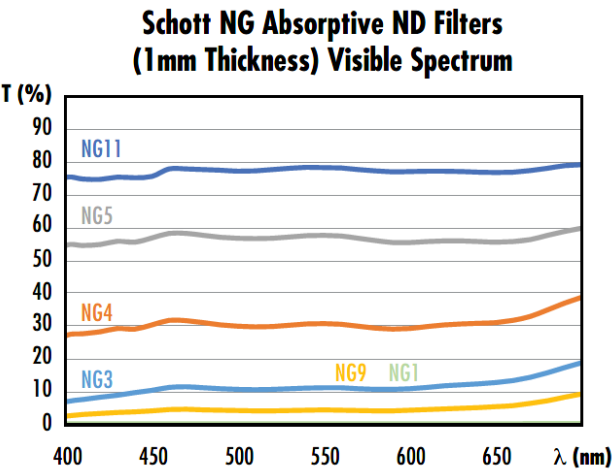
[Click here](#) to download SCHOTT's colored glass filter calculation program which can be used to calculate the internal transmittance and external transmission of each SCHOTT glass type. The program can simulate the performance of individual filters with user specified thickness or of stacked filters with varying glass types and thicknesses.

Interactive transmission curves are also available [here](#).

### Immediate Custom Quotes Available

If you have a need for any round, square, or rectangular size of a SCHOTT NG Gray Glass Neutral Density (ND) Filter in dimensions between 5mm and 50mm, please visit our [Colored Filter Glass Tool](#). We'll provide an immediate quote, and can deliver the part to your requested size in approximately 2 weeks. A full list of standard manufacturing tolerances and restrictions are listed. For fully customized filters to your requirements, visit our [Customized Optical Filter Glass Capabilities](#) page.

## Technical Information



| Glass Type | Thickness | Min. Transmission (%) | Max. Transmission (%) |
|------------|-----------|-----------------------|-----------------------|
| NG3        | 1         | 7.4                   | 11.1                  |
|            | 2         | 0.01                  | 2.8                   |
|            | 3         | 0.01                  | 1.9                   |
| NG4        | 1         | 24.9                  | 31.3                  |
|            | 2         | 6.1                   | 11.6                  |
|            | 3         | 0.01                  | 5.5                   |
| NG5        | 1         | 49.8                  | 55.4                  |
|            | 2         | 27.2                  | 32.8                  |
|            | 3         | 14.3                  | 19.9                  |
| NG9        | 1         | 1.8                   | 5.5                   |
|            | 2         | 0.01                  | 2.0                   |
|            | 3         | 0.01                  | 1.8                   |
| NG11       | 1         | 70.1                  | 73.8                  |
|            | 2         | 54.2                  | 57.9                  |
|            | 3         | 42.2                  | 45.9                  |

Quote Your Size

Compatible Mounts

