All Products / Optics / Optical Le... / 3D Printed Gradient Index (GRI...

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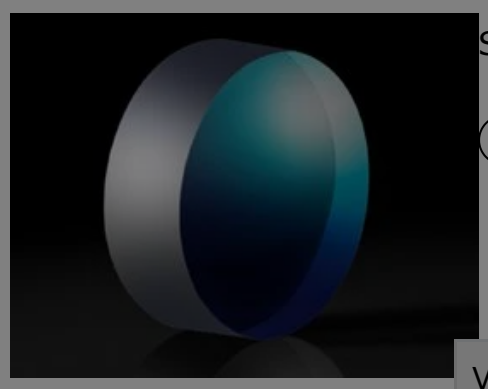
# 5mm Dia., 15mm...



3D Printed Gradient Index (GRIN) Lense...

- 1 +

**€79,00**

ADD TO CART

| Volume Pricing | |
|---|---|
| Qty 1+ | **€79,00** each |
| Need More? | **Request Quote** |

Prices shown are exclusive of VAT/local taxes

**Product Downloads**

STEP:step | PDF Drawing:pdf | IGES:igs | eDrawing:eprt | EO Spec Sheet | **Download All**

## General

| | |
|---|---|
| **Type:** | Gradient Index Lens |

## Physical & Mechanical Properties

| | | | |
|---|---|---|---|
| **Diameter (mm):** | 5.00 | **Length (mm):** | 3.00 |

## Optical Properties

| | | | |
|---|---|---|---|
| **Effective Focal Length EFL (mm):** | 15.57 | **Substrate:** ⓘ | Polymer Containing Nanoparticles |
| **f/#:** | 3.1 | **Coating:** | Uncoated |
| **Back Focal Length BFL (mm):** | 15 | **Index of Refraction ($n_d$):** | Polymer 1: 1.538<br>Polymer 2: 1.491 |

## Regulatory Compliance

| | |
|---|---|
| **Certificate of Conformance:** | **View** |

# Product Details

- Additively Manufactured through 3D Printing
- Highly Customizable Technology Enables Complex Lens Designs
- Variable Index by Alternating Polymer Material

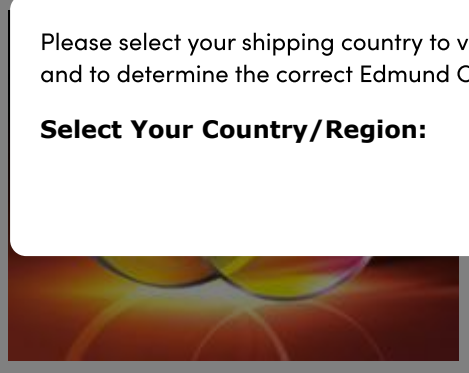
3D Printed Gradient Index (GRIN) Lenses are additively manufactured through 3D inkjet-printing. These gradient optics are printed from two polymer inks containing nanoparticles and then cured to hold shape. By changing the nanoparticle concentration during the manufacturing process, a gradient refractive index is created in the optic which can be designed to vary in any axis. The 3D inkjet-printing process is capable of altering the refractive index contrast, refractive index gradient, and chromatic dispersion of the produced lenses, enabling highly complex or freeform optical functions. 3D Printed Gradient Index (GRIN) Lenses are used in defense applications, including night vision systems and imaging systems for unmanned aerial vehicles, to create smaller, lighter optical systems.

This product is a demonstration of the capabilities possible with customizable 3D printed lens technology; please **contact us** to discuss how it can be used with your application.

## Frequently Purchased Together

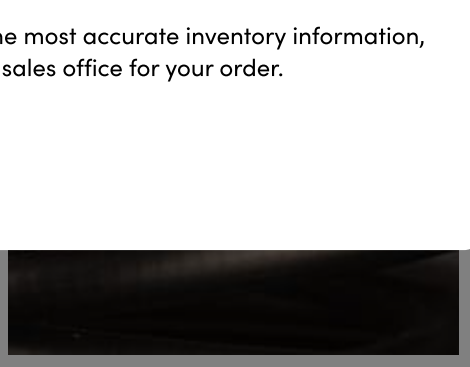
#32-303 – 6.25mm Dia. x 20mm FL, $MgF_2$ Coated, Achromatic Doublet Lens
**€71,00**

Qty



#34-527 – 50mm Diameter, Outdoor, Hydrophobic Window
**€100,00**

Qty



#39-365 – 1/16" x 48", Flexible Fiber Optic Light Guide
**€125,00**

Qty

#45-036 – 50.0mm Dia. x -100 FL, Uncoated, Plano-Concave Lens
**€54,00**

Qty

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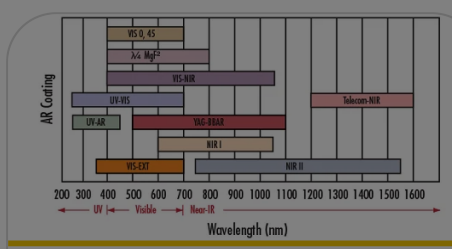
# Resources

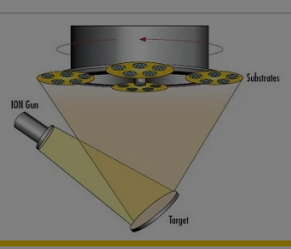
### Media Type

- [ ] Application Note
- [ ] Technical Tool
- [ ] Trending in Optics
- [ ] FAQ
- [ ] Glossary
- [ ] Video



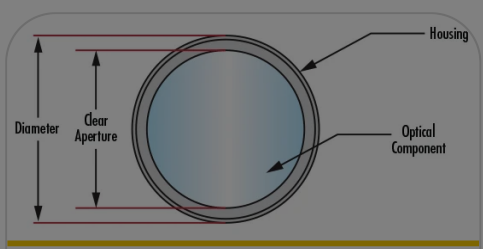

APPLICATION NOTE

Anti-Reflection (AR) Coatings



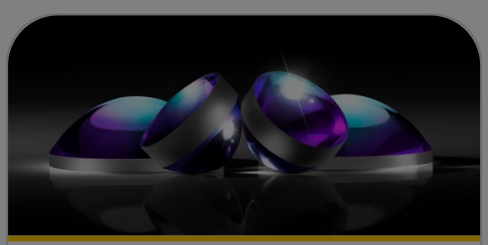

APPLICATION NOTE

An Introduction to Optical Coatings



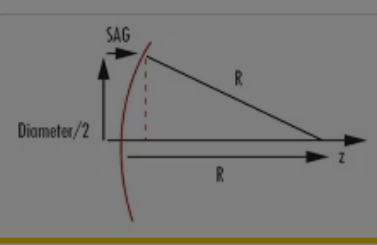

APPLICATION NOTE

Understanding Optical Specifications



APPLICATION NOTE

Lens Geometry Performance Comparison




TECHNICAL TOOL

SAG Calculator

TRENDING IN OPTICS

Future of Spherical Lenses

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