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3.0mm Diameter



Sapphire and Ruby Ball Lenses

- 1 +

€28^{,25}

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General

Type: Ball Lens

Physical & Mechanical Properties

Diameter (mm): 3.00

Specific Gravity (g/cm³): 3.98

Compressive Strength (psi): 300,000

Diameter Tolerance (µm): ±2.54

Optical Properties

Substrate: Sapphire (Al₂O₃)

Coating: Uncoated

Wavelength Range (nm): 200 - 5500

Index of Refraction (n_d): 1.77

Sphericity (µm): 0.625

Wavelength Range (µm): 0.2 - 5.5

Material Properties

Coefficient of Thermal Expansion CTE (10⁻⁶/°C): 8.4

Porosity (%): 0.00

Environmental & Durability Factors

Melting Temperature (°C): 2053.00

Regulatory Compliance

RoHS 2015: **Compliant**

Certificate of Conformance: [View](#)

Need different specifications?

Edmund Optics offers comprehensive custom manufacturing capabilities to meet your specific requirements. Whether in the prototyping phase or full-scale production, our experienced engineers are here to assist—from concept to completion.

Our capabilities include:

- Custom dimensions, materials, coatings, and more
- High-precision surface quality and flatness
- Tight tolerances and complex geometries
- Scalable production—from prototype to volume

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Application
s. Our experienced

Product Details

- Excellent for Severe Environments
- High Strength and Hardness
- High Chemical Stability
- **Sapphire and Ruby Half-Ball Lenses** Also Available

Sapphire and Ruby Ball Lenses are both made from Al₂O₃. Ruby or Ruby-Doped sapphire owes its red color to traces of chromium oxide (chromium content for ruby balls is typically >0.5%). While their physical and chemical properties are similar, Sapphire has superior optical transmission. Ruby Ball Lenses are easier to see and handle for physical applications. Sapphire and Ruby Ball Lenses are ideal for improving signal coupling between fibers, emitters, and detectors. They are also used in endoscopy, bar code scanning, ball pre-forms for aspheric lenses, and sensor applications. [Sapphire and Ruby Half-Ball Lenses](#) are also available.

For general information about ball lens, as well as how to calculate the NA and Focal Length, view [Understanding Ball Lenses](#).

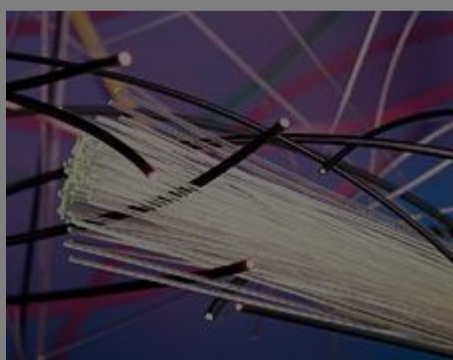
Related Products



#12-869 - Small Lens Clamp for 1-3mm Dia. Optics
€160,00

Qty

Frequently Purchased Together



#02-535 - 1500µm, Optical Grade Plastic Optical Fiber Unjacketed
€2,75

Qty



#03-618 - 5mm Spacer to convert CS-Mount Cameras to C-Mount
€29,00

Qty



#03-627 - C-Mount Male to Olympus (RMS/DIN) Female Step-Down Adapter
€52,00

Qty



#32-021 - 6mm Dia. x 6mm FL Uncoated, Double-Convex Lens
€32,25

Qty

Compatible Mounts

	Title	Type	Compare	Stock Number	Price	Buy
MORE+	Small Lens Clamp for 3mm Dia Optics				€160,00	10 In Stock <input type="text" value="1"/>

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- Technical Tool
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- Glossary

APPLICATION NOTE

Anti-Reflection (AR) Coatings

TECHNICAL TOOL

Ball Lens Calculator

APPLICATION NOTE

Understanding Ball Lenses

FAQ

I am trying to determine whether it is possible to us...

GLOSSARY

Sphericity

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Fiber Coupler Calculator

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