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2.5mm Diameter, Sapphire Ball Lens

Sapphire and Ruby Ball Lenses

Stock **#43-819** **20+ In Stock**

- 1 + **C$39.55**

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Volume Pricing	
Qty 1-10	**C$39.55** each
Qty 11-49	**C$32.20** each
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General

Type:
Ball Lens

Physical & Mechanical Properties

Diameter (mm):
2.50

Specific Gravity (g/cm^3):
3.98

Compressive Strength (psi):

300,000

Diameter Tolerance (µm):
±2.54

Optical Properties

Substrate:
Sapphire (Al_2O_3)

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

Reach 247:
Compliant

Need different specs or modifications?

Edmund Optics offers comprehensive custom manufacturing services for optical and imaging components tailored to your specific application requirements. Whether in the prototyping phase or preparing for full-scale production, we provide flexible solutions to meet your needs. 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

Learn more about our custom manufacturing capabilities or submit an inquiry here.

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 Al203. 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.**

Compatible Mounts

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