

5.0mm Diameter, Sapphire Ball Lens



Sapphire and Ruby Ball Lenses

Stock #43-646 **5 In Stock**

1 MRP ₹3,532

Price inclusive of all taxes

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Volume Pricing	
Qty 1-10	₹3,532 each
Qty 11-49	₹2,825 each
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General

Ball Lens **Type:**

Physical & Mechanical Properties

5.00 **Diameter (mm):**

3.98 **Specific Gravity (g/cm³):**

300,000 **Compressive Strength (psi):**

±2.54 **Diameter Tolerance (µm):**

Optical Properties

Sapphire (Al₂O₃) **Substrate:**

Uncoated **Coating:**

200 - 5500 **Wavelength Range (nm):**

1.77 **Index of Refraction (n_d):**

0.625 **Sphericity (µm):**

0.2 - 5.5 **Wavelength Range (µm):**

Material Properties

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

0.00 **Porosity (%):**

Environmental & Durability Factors

2053.00 **Melting Temperature (°C):**

Regulatory Compliance

Compliant **RoHS 2015:**

View **Certificate of Conformance:**

Compliant **Reach 247:**

Switzerland **Country of Origin:**

Edmund Optics India Private Limited
267, Greystone Building, Second Floor,
6th Cross Rd, Binnamangala,
Stage 1, Indiranagar, Bengaluru,
Karnataka, India 560038
Phone: +91- 80-6845 0000 **Imported By:**

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 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](#).

Compatible Mounts