Right Angle Prisms

- Laser or laboratory quality
- Fused Silica or Glass
- 90 or 180 degree reflection
- Antireflection coatings available

A Right Angle Prism is used to turn or deflect a beam through 90° or 180°. In either case this is achieved by total internal reflection and produces a very efficient broadband reflector.

It is important that the incoming beam is collimated and enters the prism at a normal angle of incidence. This is so that total internal reflection can be achieved.

A range of both laser and laboratory quality prisms are available. These are available in either fused silica or BK7 glass.

90° Deflection

For a 90° deflection the total internal reflection occurs at the hypotenuse face.

Provided that the prism surface is clean and the incident angle on the hypotenuse is at 45°, the prism will act as a very efficient broadband reflector. The image is erect and reversed.

180° Deflection

For a 180° deflection the Right Angle Prism is used with the hypotenuse as the entrance and exit face, with the total internal reflection occurring at the right angle faces. The main application of this is to use it as a retroreflector provided that the plane of the incident beam includes the vertex.

Kinematic Prism Platforms

Kinematic Prism Platforms are also available on page 94.
**Laser Quality**

Ealing offers a range of laser quality right angle prisms. These have been manufactured with high precision and selected for low scatter. Surface finish and angular accuracy are tightly maintained.

Fused silica is an ideal material for most laser applications because of its thermal handling capabilities. Glass is recommended for lower power applications.

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**Specifications**

**FUSED SILICA LASER QUALITY RIGHT ANGLE PRISMS**

- **Material:** UV grade Fused Silica
- **Dimensions Tolerance:** +0/- 0.25 mm
- **Angular Deviations Tolerance:** <3 arcmin
- **Surface Quality:** 10-5
- **Flatness:** λ/10
- **Uncoated**

**GLASS LASER QUALITY RIGHT ANGLE PRISMS**

- **Material:** BK7 glass
- **Dimensions Tolerance:** +0/- 0.25 mm
- **Angular Deviations Tolerance:** <3 arcmin
- **Surface Quality:** 20-10
- **Flatness:** λ/4; 50.8 mm
- **Uncoated**

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**Catalog Size A=B Price**

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