

# CAPABILITIES

## Prisms

Prism is a general term for optics used to change the direction of an incident beam by utilising the refractive and reflective properties of the glass. The extent and direction of the beam deviation is dependant on the prism angles and the material used.

The most basic prism types, such as right angled prisms, use a single reflective surface to deviate the incident beam through 90°, while more complex prisms such as the Pellin-Broca type utilise the complex interaction of different angled surfaces and the effect of Brewster's angle to separate harmonics in laser beams.



Knight Optical offer extensive custom prism capabilities to manufacture bespoke products to our customer's specifications. We offer a range of materials and designs as small as 5mm up to sizes in excess of 200mm, with prism angle tolerances as small as 3 arcminutes where required. Prisms can be AR coated for improved transmission or mirror coated dependant on type.

## Custom capabilities

**General dimensions:**

5mm to 300mm+

**Common types:**

Right angled, Equilateral, Inverting, Porro, Dove, Amici, Wedge, Rhomboid, Penta, Pellin-Broca, Littrow, Anamorphic pairs, Corner cube, Polygon, Fresnel

**Angular tolerance:**

< 3 arcseconds

**Surface form:**

< 1/10th wave @ 633nm

**Surface quality:**

< 10:5

**Common materials:**

Schott or equivalent BK7, SF11, F2  
UVFS or IR crystal

**Coating options:**

AR or mirror coated

**Mounting options:**

Mounted or unmounted

All products are tested in our state of the art metrology laboratory by our highly trained technicians to ensure compliance with the specification. Parts are then sent to our QA team to be cleaned and checked for surface imperfections before dispatch.

Please contact our technical sales team on (+44) 1622 849 444 to discuss your custom prisms requirements and discover how Knight Optical can help improve your supply chain experience. Alternatively, email us your requirements by clicking on the links below.



**EU:** [info@knightoptical.co.uk](mailto:info@knightoptical.co.uk)  
**US:** [usasales@knightoptical.com](mailto:usasales@knightoptical.com)

