

PhotonEdge

Precision Optical Components

Pellin-Broca Prism

Product Datasheet | N-BK7 / UV Fused Silica | Standard Grade

July 2026 | V1.0

1. Product Overview

PhotonEdge Pellin-Broca Prisms are manufactured from high-quality N-BK7 / UV Fused Silica. Pellin-Broca prisms are constant-deviation dispersing prisms that separate specific wavelengths at a fixed 90 deg deviation angle. Widely used in monochromators, spectrometers, and laser wavelength separation systems.

All prisms feature precision-polished surfaces with tight angle tolerances and anti-reflection coatings for maximum transmission.

PhotonEdge prisms feature $\lambda/10$ surface flatness and ± 3 arcmin angle tolerance, delivering excellent quality at competitive prices.

2. Technical Specifications

Parameter	Specification
Material	N-BK7 / UV Fused Silica
Type	Pellin-Broca Prism
Apex Angles	90 deg-60 deg-60 deg-90 deg
Angle Tolerance	< 3 arcmin
Surface Flatness	$\lambda/10$ @ 632.8nm
Surface Quality	40-20 Scratch-Dig
Clear Aperture	> 90% of face dimension
Coating	AR Coating, R < 0.5% per surface
Operating Temperature	-20 degC to +60 degC

3. Standard Models

Custom Options: Other materials (CaF2, ZnSe, Ge, Sapphire) and custom geometries are available.

Standard models are in stock with typical delivery of 1-2 weeks. Custom sizes, angles, and coatings can be manufactured in 3 weeks.

4. Material Properties

N-BK7 is a borosilicate crown glass with excellent performance in the visible and near-infrared (350nm - 2.5um, $n_d = 1.5168$).

UV Fused Silica is a synthetic amorphous SiO₂ with excellent UV transmission (180nm - 2.5um, $n_d = 1.4584$), high laser damage threshold, and near-zero thermal expansion coefficient.

For infrared applications (2-14um), we also offer prisms in ZnSe, Ge, and Si. Contact us for details.

5. Coating Specifications

All standard models feature multi-layer AR coatings. Custom coatings are available.

Coating Type	Wavelength	Reflectance	Applications
Standard	400-700nm	R < 0.5% per surface	Visible imaging, general optics
Optional	650-1000nm	R < 0.5% per surface	Near-infrared systems
Optional	400-1000nm	R < 1.0% per surface	Multi-wavelength systems
Optional	250-400nm	R < 1.5% per surface	UV imaging systems

6. Ordering Information

Sample Policy: First-time customers can order single-piece samples at regular price. 50% sample credit applies to subsequent bulk orders of 50+ pieces.

When ordering or requesting a quote, please provide:

1. Model number or size and material requirements
2. Coating specification (standard visible AR)
3. Quantity and delivery requirements
4. Special requirements

Minimum Order Quantity: 1 piece for standard models.

Lead Time: 1-2 weeks for stock. 3 weeks for custom.

7. Contact Information

Beijing Hengdingguang Technology Co., Ltd.

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Manufacturing: 15+ years experience | 67+ product types | 500+ global clients

Quality Assurance: 100% inspection | $\lambda/10$ surface flatness | Zero-defect shipping