

PhotonEdge

Precision Optical Components

Equilateral Prism

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

July 2026 | V1.0

1. Product Overview

PhotonEdge Equilateral Prisms are manufactured from high-quality N-BK7 / UV Fused Silica. Equilateral prisms disperse white light into its spectrum through dispersion, or separate different wavelengths. Widely used in spectrometers, laser wavelength selection, and optical imaging 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	Equilateral Prism
Apex Angle	60 deg $\pm$ 3 arcmin
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.

Brand: PhotonEdge - Precision Optical Components

Website: <https://photonedgeoptics.com>

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Address: Beijing, China

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

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