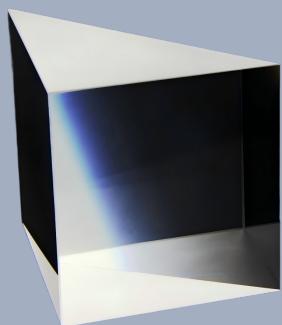


# Optical Prisms

## Right-Angle Prism

Making it the ideal choice for constructing compact optical paths and imaging systems

- High Efficiency Beam Deviating
- Premium Optical Material
- Precision Manufacturing
- Versatile Coating Options
- Multifunctional Application



One Platform Many Possibilities

Contact Us [sales@venuslabtech.com](mailto:sales@venuslabtech.com)

Get a Quote



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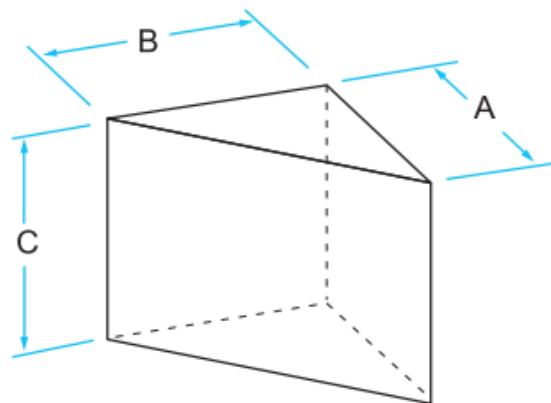
## Overview

### Precision Beam Steering: Efficient 90° Deviation via Total Internal Reflection

Our Right-Angle Prisms are the industry standard for achieving 90° light deviation or 180° image rotation. Fabricated from high-quality **K9 (N-BK7 equivalent)** or **UV Fused Silica**, these prisms utilize **Total Internal Reflection (TIR)** on the hypotenuse face to deliver superior transmission efficiency and broader spectral performance compared to standard coated mirrors.

When light enters perpendicular to one of the legs, it is reflected by the hypotenuse and deviated by 90°, making these prisms ideal for borescopes, medical instrumentation, and laser alignment systems. Additionally, they can function as 180° retroreflectors when light enters perpendicular to the hypotenuse. We offer optional Anti-Reflection (AR) coatings on the legs or metallic/dielectric coatings on the hypotenuse to suit specific system requirements.

### Structural Diagram:



## Qualification

### Technical Specifications (Right-Angle Prisms)

Parameter	Specification
Material	Grade A K9 Glass (N-BK7 Equivalent)
Design Wavelength	587.6 nm (n=1.517)
Dimension Tolerance	+0.0 / -0.1 mm
Angle Tolerance	± 3 arc min
Surface Flatness	/4 @ 632.8 nm
Surface Quality	40-20 Scratch-Dig
Clear Aperture	> 90% of Dimension
Bevel	0.25 mm x 45° (Protective)
Coating Options	Uncoated, AR Coated, or Metal Coated

## Selection Chart

### Model Number & Dimensions

Item No.	Leg Length (A=B) (mm)	Hypotenuse (C) (mm)	Length (L) (mm)	Material
VLRAP12.7-12.7	12.7	18.0	12.7	K9 (N-BK7)
VLRAP20-20	20.0	28.3	20.0	K9 (N-BK7)
VLRAP25.4-25.4	25.4 (1")	35.9	25.4	K9 (N-BK7)
VLRAP30-30	30.0	42.4	30.0	K9 (N-BK7)

## Service & Support

We are dedicated to delivering exceptional optoelectronic solutions to every client. From precision manufacturing and secure delivery to full-lifecycle technical support, we are here to ensure a seamless and reliable experience at every step.

### 1. Warranty Policy

#### Quality First, Worry-Free Operation

**Warranty Period:** We offer a **two-year** warranty service for all of our core optoelectronic products, effective from the date of shipment.

**Coverage:** We provide free repair or replacement services for malfunctions caused by material defects or workmanship errors under normal operating conditions.

**Rapid Response:** Upon receiving a warranty claim, we guarantee to initiate the assessment process within **24 hours** to minimize your equipment downtime.

### 2. Technical Support

#### Expert Team, Full-Process Guidance

**Technical Consultation:** Our team of senior optical engineers provides **24/7 online support** to assist with installation, commissioning, optical path alignment, and parameter optimization.

**Scheduled Maintenance:** We offer full-lifecycle maintenance recommendations, including firmware upgrades, optical component cleaning guidelines, and precision calibration services.

**Training Services:** We provide customized remote or on-site operational and safety training to ensure your team can operate the equipment efficiently and safely.

### 3. Logistics & Delivery

#### Precision Packaging, Global Reach

**Professional Packaging:** Given the fragile nature of optical instruments, we utilize industrial-grade shockproof, anti-static, and moisture-proof vacuum packaging to ensure zero damage during transit.

**Logistics Partners:** We partner with top-tier global logistics providers (**DHL / FedEx / UPS / SF Express**) to offer reliable shipping with real-time tracking.

**Shipping Insurance:** All shipments are fully insured to eliminate logistics risks.

### 4. Compliance & Certification

#### Strict Standards, Total Compliance

**Quality Certification:** Our manufacturing process is **ISO 9001 certified**, and our products comply with international standards such as **CE and RoHS**.

**Export Compliance:** "Committed to environmental responsibility, all our products comply with **RoHS 2.0** and **REACH standards**, ensuring safety and global compliance."

## Explore Series

Model	Surface Accuracy	A=B=C(mm)	Angle Offset
VLRAP12.7-12.7	/4	12.7	30s
VLRAP20-20	/4	20	30s
VLRAP25.4-25.4	/4	25.4	30s
VLRAP30-30	/4	30	30s

 Get in touch with our team to explore configurations, request a quote, or learn more about customized solutions tailored to your needs.

Let us help you move science forward—faster and smarter.

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