

TECHSPEC® 12.5mm Dia. 4° Beam Dev. Fused Silica Wedge Prism 1064nm Laser V-Coat



TECHSPEC Fused Silica Wedge Prisms

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General

Note:
Specify this as S1 & S2 power and irregularity, not the overall power of the wedge

Physical & Mechanical Properties

12.50	Diameter (mm):
1.50	Thickness (mm):

Protective as needed **Bevel:**

8° 17' 38" **Wedge Angle (arcmin):**

Optical Properties

30 **Angle Tolerance (arcsec):**

Laser V-Coat (1064nm) **Coating:**

1064 **Design Wavelength DWL (nm):**

[Fused Silica](#) (Corning 7980) **Substrate:**

20-10 **Surface Quality:**

Beam Deviation **Image Orientation:**

$R_{\text{rms}} < 0.25\%$ @ 1064nm **Coating Specification:**

15 J/cm² @ 1064nm, 20ns, 20Hz **Damage Threshold, By Design:**

0.50 **Power (fringes) @ 632.8nm:**

0.20 **Irregularity (fringes) @ 632.8nm:**

4.00 **Ray Deviation @ 355nm (°):**

6.99 **Power (diopters):**

8.29° **Wedge Angle (°):**

Material Properties

0.52 **Coefficient of Thermal Expansion CTE (10⁻⁶/°C):**

Regulatory Compliance

[Compliant](#) **RoHS 2015:**

[Compliant](#) **Reach 209:**

[View](#) **Certificate of Conformance:**

Need different specs or modifications?

Edmund Optics offers comprehensive custom manufacturing services for optical and imaging components tailored to your specific application requirements. Whether in the prototyping phase or preparing for full-scale production, we provide flexible solutions to meet your needs. Our experienced engineers are here to assist—from concept to completion.

Our capabilities include:

- Custom dimensions, materials, coatings, and more
- High-precision surface quality and flatness
- Tight tolerances and complex geometries
- Scalable production—from prototype to volume

Learn more about our [custom manufacturing capabilities](#) or submit an inquiry [here](#).

Product Details

- Deviates Laser Beam Path from 0.5° - 5.0°
- Ideal for UV to NIR Beam Steering Applications from 250 to 1064nm
- Ideal for High Power Beam Steering Applications

TECHSPEC® Fused Silica Wedge Prisms are designed for a range of laser beam steering applications requiring UV-VIS or first through fourth Nd:YAG harmonic Anti-Reflection Coatings. They are optimized to ensure the highest level of system performance using tightly controlled specifications including $\lambda/10$ surface flatness, 20-10 surface quality, and a wedge tolerance of 15 or 30 arcseconds. The Nd:YAG coated versions feature high transmittance and guaranteed laser damage thresholds specific to the design wavelength. TECHSPEC® Fused Silica Wedge Prisms utilize a wedge design to deviate laser beam path from 0.5° – 5°. By creating a risley prism pair using two wedge prisms with the same ray deviation, custom beam steering up to two times the wedge deviation is possible. A low coefficient of thermal expansion ensures accurate beam steering in high power laser applications.

Note: Power Diopter is defined as 1cm deviation at a distance of 1m from the prism. TECHSPEC® Wedge Prisms are also available in [N-BK7 versions](#).

Technical Information

