



SPECIFICATION

1.0 inch OFI Wedge Prism

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This specification is for anti-reflection coated, laser-quality, wedged window. It will be used at the input of the OFI to correct the input beam angle

Applicable Documents

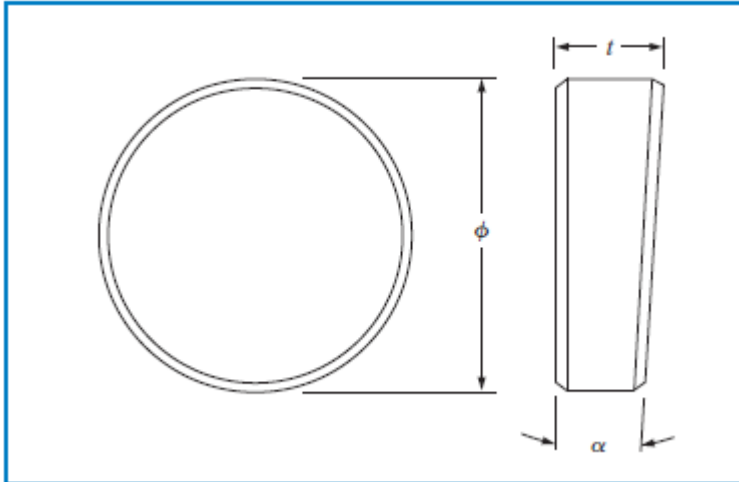
Requirements

Physical Configuration

Diameter	1.00" +/- 0.01"
Thickness	0.375" +/- 0.010" (at thickest point)
Wedge	1 degree +/- 6 arc minute Thick edge of optic to be marked with a scribe line across the barrel
Bevel	45 deg. bevel on both edges, width approx. 0.03" or as appropriate to prevent chipping
Clear Aperture	Exceeds 85% of diameter
Markings	Markings: Part and serial number, as defined below, shall be scribed on the barrel



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Substrate Material

Fused silica, Corning 7980 or equivalent, grade 0A or better

Part and Serial Number

The Part/Serial number shall be of the format:

D1200434-v1 YY is incremental, starting at 01

Surfaces 1 and 2, measured over the clear aperture

Surface Quality: Surfaces 1 and 2

Laser grade polish: 10-5 scratch-dig surface quality

Transmitted wavefront error:

$\lambda/20$ p-v or less, at 633 nm

Surface roughness, Surfaces 1 and 2:

< 1 Angstrom RMS

Anti-Reflection Coatings:

$R < 0.05\%$ for 0-5 deg. AOI, *s*- & *p*-polarization, 1064 nm

Applied to surfaces S1 and S2.



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Durability per MIL-C-675C, Coating Adhesion and Durability, or current compatible standard, to be approved by LIGO.

Testing and Documentation

Specification	Test Method	Frequency of Inspection	Data Delivered
Physical Dimensions	Visual Inspection	100%	Certification
Surface Quality	Visual Inspection	100%	Certification
Transmitted Wavefront Error	Interferometry	100%	Certification
AR Coatings	Spectrophotometer	Witness sample for each coating run	Spectral scans