

**aLIGO ISC Optics: 2" 95% Reflector @ 532nm**

APPROVALS	DATE	RE V	DCN NO.	BY	CHECK	DCC	DATE
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DCC RELEASE							

1 Description

2" Ø Flat/Flat 95% reflector @ 532nm

2 Material

Fused Silica

3 Dimensions

2"Ø +.000/-.050" X .375" ± .020" tk., Plano / Plano

4 Surface Roughness**Side 1**

Commercial polish

Surface Roughness: <5Å RMS in CA

Surface Quality: 10-5

Side 2

Commercial Polish

Surface Roughness: <5Å RMS in CA

Surface Quality: 40-20

5 Surface Figure**Side 1**

Flat < λ/10 at 632.8 over central 85%

Side 2

Flat < λ/4 at 632.8 over central 85%

6 Coating

Wavelength: 532nm

Angle of incidence: 45°

Side 1

R = 95% +- 1% both for S and P polarization

Side 2

R<0.25% (best effort), both for S and P polarization



SPECIFICATION

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Serial numbers and registration marks shall be scribed or etched on the barrel of the optic for in-vacuum use

Coating vendor to provide:

1. Three spectrophotometer graphs of the reflectance and transmittance of the HR coatings; one covering the spectrum from 500nm to 1200nm; the others, with increased sensitivity, showing wavelengths from 900nm to 1100nm and from 500nm to 600nm
2. Spectrophotometer graphs of the reflectance of the AR coating taken as cited above.