

**aLIGO ISC Optics: 2" High Reflector @ 532nm**

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

1 Description

2" Ø Flat/Flat high reflectors @ 532nm

2 Material

Corning HPFS 7980 (high purity fused silica, UV grade)
Grade 1G

3 Dimensions

2"Ø +.000/-.005" X .375" ± .020" tk., Plano / Plano

4 Surface Roughness**Side 1**

Super polish

Surface Roughness: <1Å 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 80%

Side 2

Flat < λ/4 at 632.8 over central 80%

6 Coating

Wavelength: 532nm

Angle of incidence: 45°

Side 1

R>99.99% (best effort), both for S and P polarization



SPECIFICATION

aLIGO ISC Optics: 2" High Reflector @ 532nm**Side 2**

AR coating, $R < 0.75\%$ (best effort), both for S and P polarization

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.