



ALIGO TELESCOPE MIRROR SUBSTRATE #2, COATED

AUTHOR:	CHECKED:	DATE	APPROVALS		
			DCN NO.	REV	DATE
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Applicable Documents

- ALIGO-D070095-00-D Telescope Mirror #2 Substrate
- ALIGO-D070087-00-D Telescope Mirror #2 Blank

Requirements

Physical Configuration

Fabricate from D070095-00-D ALIGO Telescope Mirror #2 Substrate
Arrow points in the direction of the highly reflective surface.

Surface 1 and 2

- Coating: Centered at 1064 nm
- Angle of Incidence: 0.62 degrees, S polarization
- Coating Uniformity: 1 nm rms – central 40 mm
10 nm p-v over 68 mm
- Scatter: < 10 ppm over central 40 mm diameter aperture
- Absorption: < 1 ppm
- Zero surface electrical field

Surface Quality

To comply with Advanced LIGO Component Specification E070082-00-D, ALIGO SUBSTRATE TELESCOPE MIRROR #2 (Page 2): “Scratches and Point Defects”.
Coating to resist abrasion test per MIL-M-13508C

Surface 1: HR coating

Transmission: < 10 ppm

Surface 2: AR coating

Reflection: < 300 ppm

NOTE:

- Coating manufacturer to provide:
- One (1 in.) witness plate from each coating run
 - Spectrophotometer graphs of Reflectance and Transmittance of HR coating