



ALIGO TELESCOPE MIRROR SUBSTRATE #1, COATED

AUTHOR:	CHECKED:	DATE	APPROVALS		
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Applicable Documents

D070094-00-D ALIGO Telescope Mirror #1 Substrate
D070086-00-D ALIGO Telescope Mirror #1 Blank

Requirements

Physical Configuration

Fabricate from D070094-00-D ALIGO Telescope Mirror #1 Substrate
Arrow points in the direction of the highly reflective surface.

Surface 1 and 2

Coating Centered at 1064 nm
Angle of Incidence 44.88 degrees, S polarization
Coating Uniformity 1 nm rms – central 40 mm
15 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 E070081-00-D, ALIGO SUBSTRATE TELESCOPE MIRROR #1 (Page 2): “Scratches and Point Defects”.
Coating to resist abrasion test per MIL-M-13508C

Surface 1: HR coating

Transmission: 1000 ppm +/- 100 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