



ALIGO LARGE TELESCOPE MIRROR SUBSTRATE, COATED

AUTHOR:	CHECKED:	DATE	APPROVALS		
			DCN NO.	REV	DATE
R. Martin, D. Reitze		04-02-07			

Applicable Documents

- D070096-00-D ALIGO Large Telescope Mirror Substrate
- D070088-00-D ALIGO Large Telescope Mirror Blank

Requirements

Physical Configuration

Fabricate from D070096-00-D ALIGO Large Telescope Mirror Substrate  
Arrow points in the direction of the highly reflective surface.

Surface 1 and 2

- Coating Centered at 1064 nm
- Angle of Incidence 0.74 degrees, S polarization
- Coating Uniformity 1 nm rms – central 200 mm
- Scatter < 15 ppm over central 200 mm
- Absorption < 1 ppm
- Zero surface electrical field

Surface Quality

To comply with Advanced LIGO Component Specification E070083-00-D ALIGO SUBSTRATE LARGE TELESCOPE MIRROR (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