



COMPONENT SPECIFICATION

TITLE 2 km TELESCOPE MIRROR SUBSTRATE #1, COATED

APPROVALS:	DATE	REV	DCN NO	BY	CHK	DCC	DATE
DRAWN: David Reitze	06-23-98						
CHECKED:							
APPROVED:							
DCC RELEASE:							

Applicable Documents

LIGO-D970590-00-D	2 km Telescope Mirror #1 Substrate
LIGO-E970147-00-D	Substrate, 2 km Telescope Mirror #1

Requirements

Physical Configuration

Fabricate from	
LIGO-D970590-00-D	2 km Telescope Mirror #1 Substrate

Surface 1 and 2

Coating to be centered at 1064 nm
 Angle of Incidence to be 0 degrees

Coating Uniformity:	1nm rms - central 3 cm 15 nm p-v - over 6.8 cm
Scatter:	<15 ppm
Absorption:	<1 ppm

Zero surface electrical field

Surface Quality

To comply with LIGO Component Specification E960093-A-D (Page 2):
 "Scratches and Point Defects"
 Coating to resist abrasion test per MIL-M-13508C

Surface 1: HR Coating

Transmission:	<20 ppm
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Surface 2: AR Coating

Reflection: < 300 ppm

NOTE:

Coating manufacturer to provide:

- 1. One (1 in.) witness plate from each coating run
- 2. Spectrophotometer graphs of Reflectance and Transmittance of HR coating