



COMPONENT SPECIFICATION

TITLE 4 km MODE CLEANER CURVED MIRROR SUBSTRATE, COATED

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

Applicable Documents

LIGO-D970593-00-D 4 km Mode Cleaner Curved Mirror Substrate
 LIGO-E970149-00-D Substrate, 4 km Mode Cleaner Curved Mirror

Requirements

Physical Configuration

Fabricate from
 LIGO-D970593-00-D 4 km Mode Cleaner Curved Mirror Substrate

Surface 1 and 2

Coating to be centered at 1064 nm
 Angle of Incidence to be 0 degrees
 Note: **HR Coating to cover only central 2.8 cm of substrate**

Coating Uniformity: 1nm rms - central 1.8 cm
 10 nm p-v over 2.8 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

Note: HR Coating to Cover Central 2.8 cm of substrate
 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