



# COMPONENT SPECIFICATION

TITLE **MODE CLEANER FLAT MIRROR SUBSTRATE, COATED**

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

## Applicable Documents

LIGO-D970591-00-D  
LIGO-E970148-00-D

Mode Cleaner Flat Mirror Substrate  
Substrate, Mode Cleaner Flat Mirror

## Requirements

### Physical Configuration

Fabricate from  
LIGO-D970591-00-D

Mode Cleaner Flat Mirror Substrate

### Surface 1 and 2

Coating to be centered at 1064 nm  
Angle of Incidence to be 45 degrees, S polarization

Coating Uniformity:	1nm rms - central 3 cm 10 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: 2000 ppm +/- 100 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