



COMPONENT SPECIFICATION
BEAM SPLITTER SUBSTRATE, COATED

TITLE

APPROVALS:	DATE	REV	DCN NO	BY	CHK	DCC	DATE
Helena Armandula	03-13-98						
DRAWN:							
CHECKED:							
APPROVED:							
DCC RELEASE:							

Applicable Documents

LIGO-D960789-B-D Beam Splitter Substrate
 LIGO-E960100-B-D Substrate, Beam Splitter

Requirements

Physical Configuration

Fabricate from
 LIGO-D960789-B-D Beam Splitter Substrate

Surface 1 and 2

Coating to be centered at 1064 nm
 Angle of Incidence to be 45 degrees - Optimized for "P" polarization

Coating Uniformity: 1nm rms - central 8 cm
 15 nm p-v - over 20 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: Beam Splitter Coating

Transmission / Reflection: 50% +/- 1%



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Surface 2: AR Coating

Reflection: < 100 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
3. Spectrophotometer graph of Reflectance of AR coating