



COMPONENT SPECIFICATION

TITLE END TEST MASS SUBSTRATE, COATED

| APPROVALS: | DATE | REV | DCN NO | BY | CHK | DCC | DATE |
|-------------------------|----------|-----|--------|----|-----|-----|------|
| DRAWN: Helena Armandula | 03-13-97 | | | | | | |
| CHECKED: | | | | | | | |
| APPROVED: | | | | | | | |
| DCC RELEASE: | | | | | | | |

Applicable Documents

LIGO-D960791-A-D End Test Mass Substrate
LIGO-E960102-A-D Substrate, End Test Mass

Requirements

Physical Configuration

Fabricate from
LIGO-D960791-A-D End Test Mass Substrate, 4K

Surface 1 and 2

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

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: 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