



**COMPONENT SPECIFICATION**  
**BEAM SPLITTER SUBSTRATE, COATED**

TITLE

APPROVALS:	DATE	REV	DCN NO	BY	CHK	DCC	DATE
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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