



**COMPONENT SPECIFICATION**

**TITLE RECYCLING MIRROR SUBSTRATE, COATED**

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

**Applicable Documents**

LIGO-D960785-B-D Recycling Mirror Substrate  
 LIGO-E960092-B-D Substrate, Recycling Mirror

**Requirements**

**Physical Configuration**

Fabricate from  
 LIGO-D960785-B-D Recycling Mirror Substrate

**Surface 1 and 2**

Coating to be centered at 1064 nm  
 Angle of Incidence to be 0 degrees for HR; ~2 degrees for AR

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 E960092-B-D (Page 2):  
 "Scratches and Point Defects"  
 Coating to resist abrasion test per MIL-M-13508C

**Surface 1: HR Coating**

Transmission: 3% +/- 0.3%



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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
3. Spectrophotometer graphs of Reflectance of AR