Applicable Documents

<table>
<thead>
<tr>
<th>Document</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIGO-D960791-A-D</td>
<td>End Test Mass Substrate</td>
</tr>
<tr>
<td>LIGO-E960102-A-D</td>
<td>Substrate, End Test Mass</td>
</tr>
</tbody>
</table>

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
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