

LASER INTERFEROMETER GRAVITATIONAL WAVE OBSERVATORY  
- LIGO -  
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**LARGE OPTICS SUSPENSION  
STRUCTURE QUALITY CONFORMANCE  
WORKSHEET**

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*Distribution of this draft:*  
detector

This is an internal working note  
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## 1 SCOPE

This Quality Conformance Worksheet is to be completed during inspection of the first article and production units of the Large Optic Suspension Structure Assembly, D960133, Recycling Mirror LOS Structure Assembly, D970551 and the LOS Height Adapter Assembly, D960145

## 2 PURPOSE

Vendors will follow the instructions outlined in the Large Optics Suspension (LOS) Structural Fabrication Specification, LIGO-E970038 to fabricate the Large Optic Suspension Structure Assemblies and fill out the following tables during first article inspection and production inspection.

**Table 1: Serial No.** \_\_\_\_\_ **Date** \_\_\_\_\_

<b>D960145, LOS Height Adapter Assembly</b>				
zone	dimension (in)	inspection value	within spec	out of spec
D5	FLATNESS .002			
D/E6	FLATNESS .002			
G5	4X,2.75			
G4	20X, 2.000			
G5	8X, 1.750			
D8	5.906			

Table 2: Serial No. \_\_\_\_\_ Date \_\_\_\_\_

<b>D960133 Large Optic Suspension Structure Assembly</b>				
zone	dimension (in)	inspected value	within spec	out of spec
B-C2,SH1	2X,6.364			
C2,SH1	4X,6.364			
C-D2,SH1	2X,14.535			
D2,SH1	4X,13.755			
E3,SH1	2X,6.364			
E4,SH1	2X,4.568			
D5,SH1	2X,17.661			
B6,SH1	2X,4.313			
E4,SH1	FLATNESS .002			
B4,SH1	FLATNESS .002			
C3,SH2	4X,4.84			
D3,SH2	4X,15.30			
F2,SH2	13.719			
F3,SH2	.891			
G4,SH2	2X,4.500			
G1,SH2	4X,7.906			
H2,SH2	4X,.594			
H2,SH2	2X,11.500			
B5,SH3	(6X)2X,.487			
B5,SH3	(6X)2X,R.0625+.0010 -.0000			
B-C5,SH3	(6)2X.281			
C4,SH3	(6) DIA 1.063			
G4,SH2	4.250			
F3	8X,.502/.500 DIA			

Table 3: Serial No. \_\_\_\_\_ Date \_\_\_\_\_

<b>D970551 Recycling Mirror LOS Structure Assembly</b>				
zone	dimension (in)	inspected value	within spec	out of spec
B-C2,SH1	2X,6.364			
C2,SH1	4X,6.364			
C-D2,SH1	2X,14.535			
D2,SH1	4X,13.755			
E3,SH1	2X,6.364			
E4,SH1	2X,4.568			
D5,SH1	2X,17.661			
B6,SH1	2X,4.313			
E4,SH1	FLATNESS .002			
B4,SH1	FLATNESS .002			
C3,SH2	4X,4.84			
D3,SH2	4X,15.30			
F2,SH2	13.719			
F3,SH2	.891			
G4,SH2	2X,4.500			
G1,SH2	4X,7.906			
H2,SH2	4X,.594			
H2,SH2	2X,11.500			
B5,SH3	(6X)2X,.487			
B5,SH3	(6X)2X,R.0625+.0010 -.0000			
B-C5,SH3	(6)2X.281			
C4,SH3	(6) DIA 1.063			
G4,SH2	4.250			
F3,SH2	2X,.502/.501 DIA			