Septum Window– Coating Specifications

AUTHOR	CHECKED	REV	DATE	APPROVALS		
				DCN NO.	REV	DATE
H. Armandula	G. Billingsley	A/v1	05-08-07	E070141	00	05-08-07
L. Austin	M. Smith	v2	16-Jun-2011	See DCC entry for approval		
M. Smith	L. Austin	V3	3/18/13	See DCC entry for approval		

1 Material

Fused Silica 7980, OA

2 Applicable Documents

LIGO- E070069- v1	Septum Window Polish, Enhanced LIGO
LIGO-D1101005	aLIGO, high quality, .75 deg wedged, 6 in. Viewport Optic

3 Coating

Wavelength: 1064 nm
Angle of incidence: 0 degrees
Scatter <15 ppm

Side 1 and 2

AR – Reflection:
Goal: < 300 ppm
Requirement: < 500 ppm

Absorption:
Requirement: < 10 ppm

Coating vendor to provide:

One 1 arc second wedged coating sample ahead of time to evaluate vendor's capability to meet coating specifications.

1. One 1 arc second wedged witness sample from each coating run
2. Spectrophotometer graphs of the reflectance of the AR coating from 800nm to 1200nm
3. Spectrophotometer graphs of the reflectance of the AR coating with increased sensitivity, to show wavelengths from 950nm to 1100nm
4. Total transmissivity measurement @ 1064 nm