



## ITM Penultimate Mass

## 1 Applicable Documents

This document supports the drawing:

D080128\_ALIGO\_SUS\_ITM QUAD Penultimate Mass

## 2 Requirements

### Material

Fused Silica (choose from following list)

- Heraeus Suprasil (any grade, including commercial grades)
- Heraeus HOQ 310
- Schott Lithosil QT
- Corning 7980 5G
- Corning 7980 Substrate Grade

NOTE: Material to be supplied with a certificate of conformity

### Physical configuration

Shape and polish according to:

D080128\_ALIGO\_SUS\_ITM QUAD Penultimate Mass

### Reference Markings:

Registration Marks shall be etched, ground or sandblasted, and located per LIGO-D080128.

### Serial Number:

The Serial number shall be etched, ground or sandblasted, and located per LIGO-D080128.

## 3 Inspection

Specification	Manufacturing note / drawing zone (LIGO-D080128)	Test Method	Data delivered
Outside diameter	(Zone E10)	Physical inspection	Measurement at six locations, plus mean measurement
Thickness	(Zone F6)	Physical inspection	Measurement at six locations, plus mean measurement
Wire groove separation	(Zone A5)	Physical inspection	Measured dimension
Face to wire groove check	-	Physical inspection	
Surface S3 to wire groove 1	Note 7	“	Measured dimension
Surface S4 to wire groove 2	Note 7	“	Measured dimension
Flat length (surface S1)	(Zone D11)	“	Measured dimension (sharp to sharp)
Flat length (surface S2)	(Zone D8)	“	Measured dimension (sharp to sharp)
Flat to Flat separation (at central location)	(Zone C9)	“	Measured dimension



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Edges and chamfers	Note 3	Visual inspection	Inspection report included with certification
Scratches and point defects	Note 3	Visual inspection	Inspection report included with certification
Serial Number	Note 8	Visual inspection	Inspection report included with certification
Bond area (surface S1)	Note 6	Interferometry	Surface map of bond surface
Bond area (surface S2)	Note 4	Interferometry	Surface map of bond surface

Table 1: Inspection requirements list

Data

To be taken as instructed in Table 1. Instrumentation used for any given measurement should be listed alongside that measurement.

Orientation

For the purpose of all data collection, data should be taken where possible from side 4 (surface S4). If this is not possible there shall be a special note beside the data indicating from what direction/how it was taken.

Format

All data shall be delivered according to Table 1.