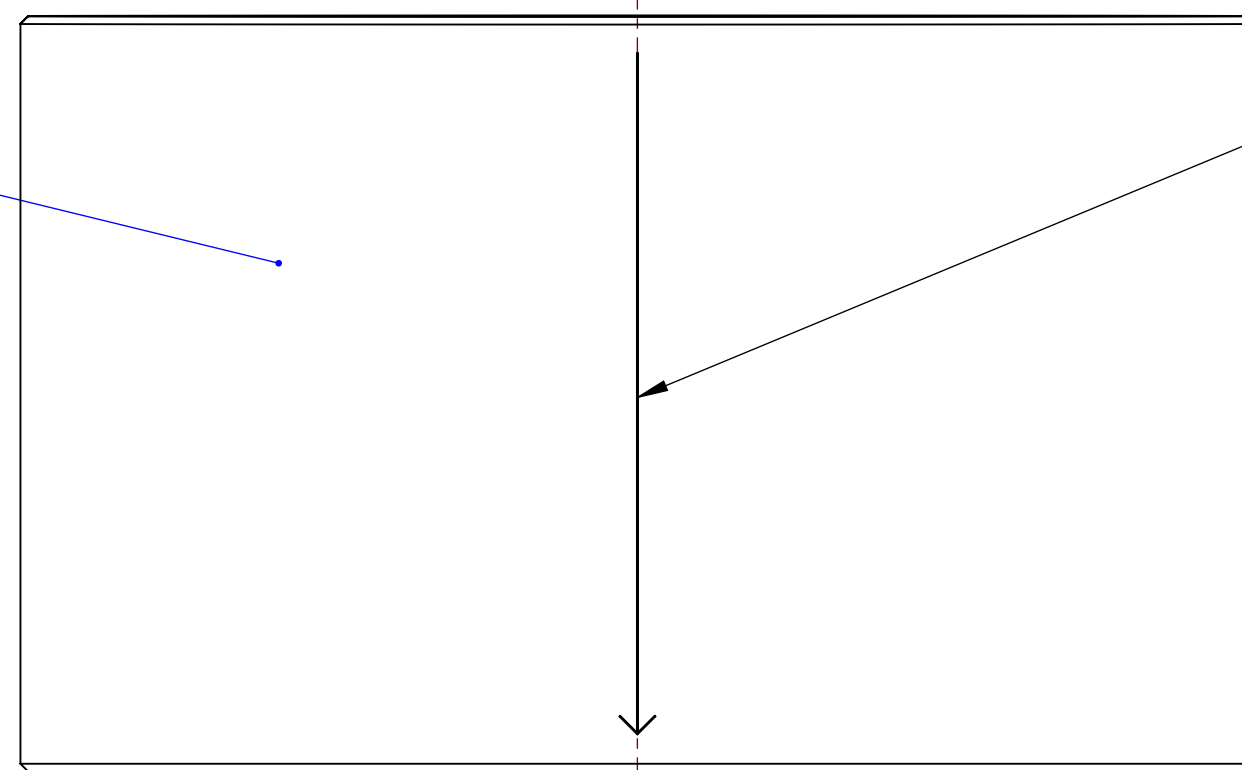
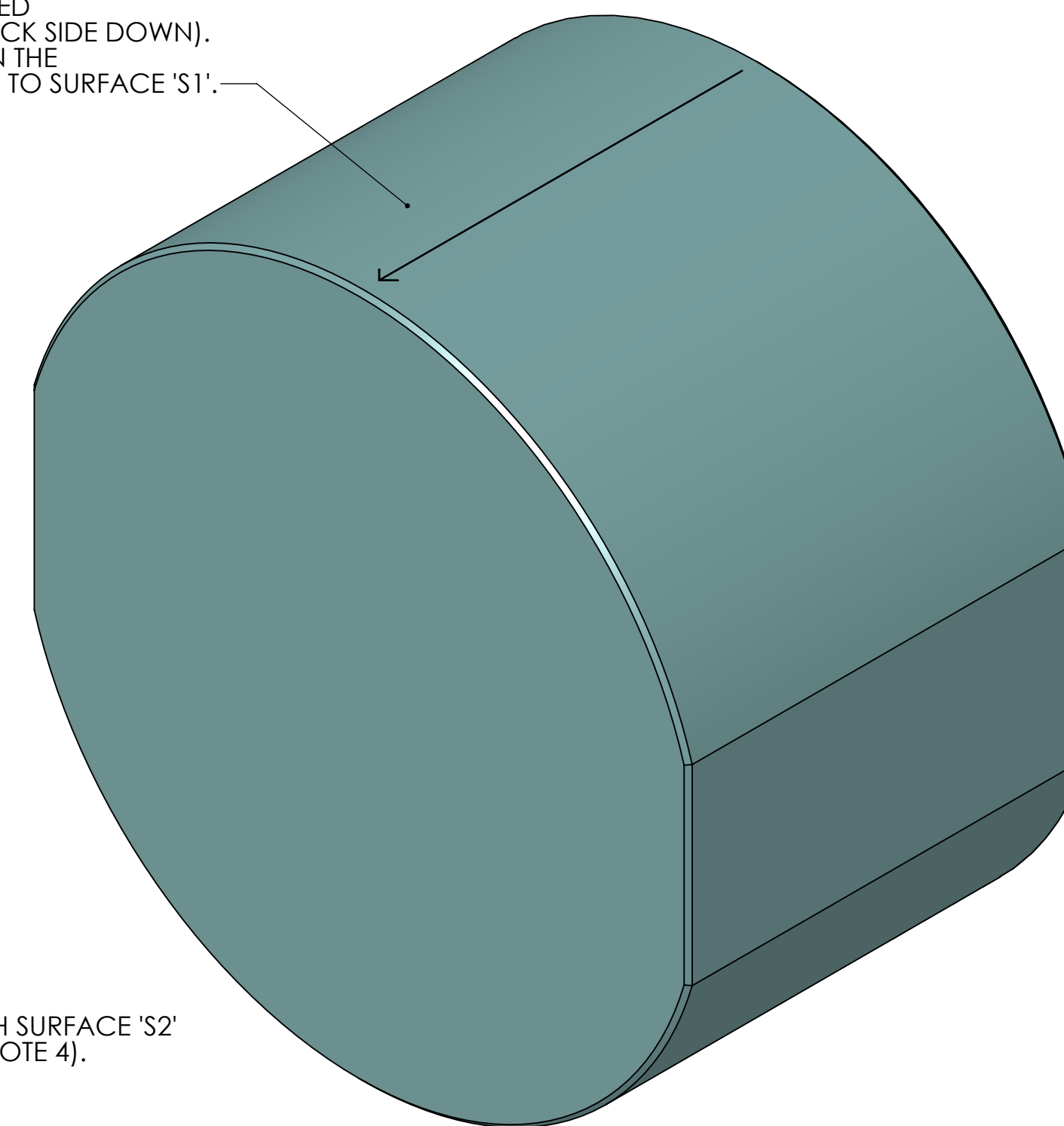


REV.	DATE	DCN #	DRAWING TREE #
v1	11th Nov 2008	LIGO-E080530-v1	
v2	Feb-20-09	LIGO-E0900046-v1	
v3	Mar-26-2009	LIGO-E0900095-v1	
v4	28 MAY 2010	E1000188	
v5	11 FEB 2020	E2000142-v0	

BARREL (SIDE) AND BEVEL POLISH (SEE NOTE 3)

ETCH OR GRIND LEGIBLE REFERENCE GROOVE (0.25mm ± 0.05mm WIDE) ALONG ϕ WITHIN ±1° CLOCKING ANGLE (WITH RESPECT TO DATUM FEATURE -A-), PARALLEL TO THE CYLINDRICAL AXIS (DEFINED BY DATUM FEATURE -A-), WITH ARROW POINTING TO SURFACE 'S1' WITHIN ±0.1mm

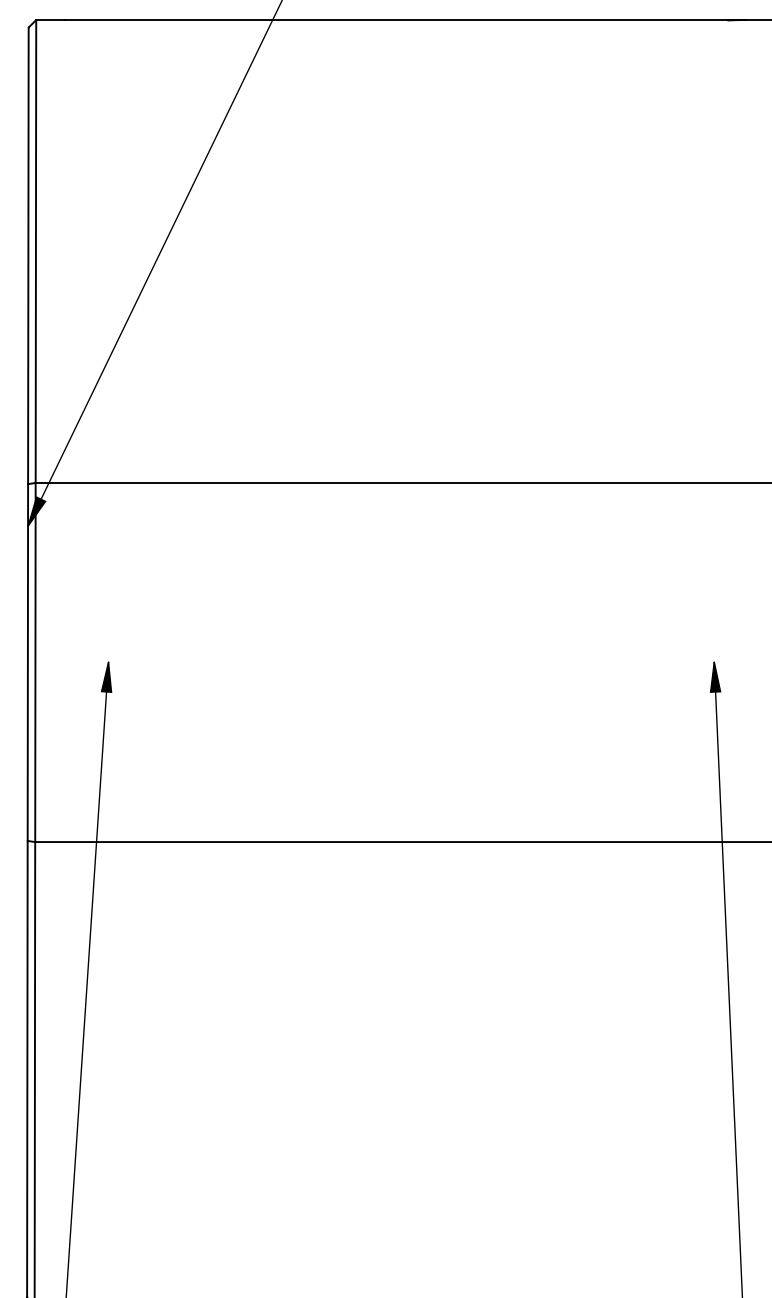
SUBSTRATE IS SHOWN IN SUSPENDED STATE WITH VERTICAL WEDGE (THICK SIDE DOWN). THE ARROWED LINE IS SHOWN ON THE THIN SIDE, AND AS STATED POINTS TO SURFACE 'S1'.



TOP VIEW

≤ 0.6 C (REFER TO NOTE 8.)

$\phi 340.00 \pm 0.25$
 ≤ 0.1
 ≤ 0.25 C



(2X, 95 TYP)

90.0°

≤ 0.25 C

S1

S3

S6 POLISH SURFACE 'S6' (SEE NOTE 3).

S1 POLISH SURFACE 'S1' (SEE NOTE 4).

S4

≤ 0.25 B
 ≤ 0.25 C

S5 POLISH SURFACE 'S5' (SEE NOTE 3).

$326.5^{+0.0}_{-0.6}$
 $\oplus 0.2$ A

C

S2 POLISH SURFACE 'S2' (SEE NOTE 4).

S2 POLISH SURFACE 'S2' (SEE NOTE 4).

ETCH OR GRIND SERIAL NUMBER, APPROX. WHERE SHOWN, LETTERING APPROX. 4mm HIGH (SEE NOTE 7 FOR FURTHER DETAILS)

POLISH CROSS HATCHED AREA SEE NOTE 6 (REPEAT ON SURFACE 'S3').

POLISH SURFACE 'S4' SEE NOTE 5 (REPEAT ON SURFACE 'S3')

4X, R5 TYP

2X, ± 0.2 x 45° ± 5° CHAMFER, ALL AROUND

10.0

32.5

65.0

(2.0)

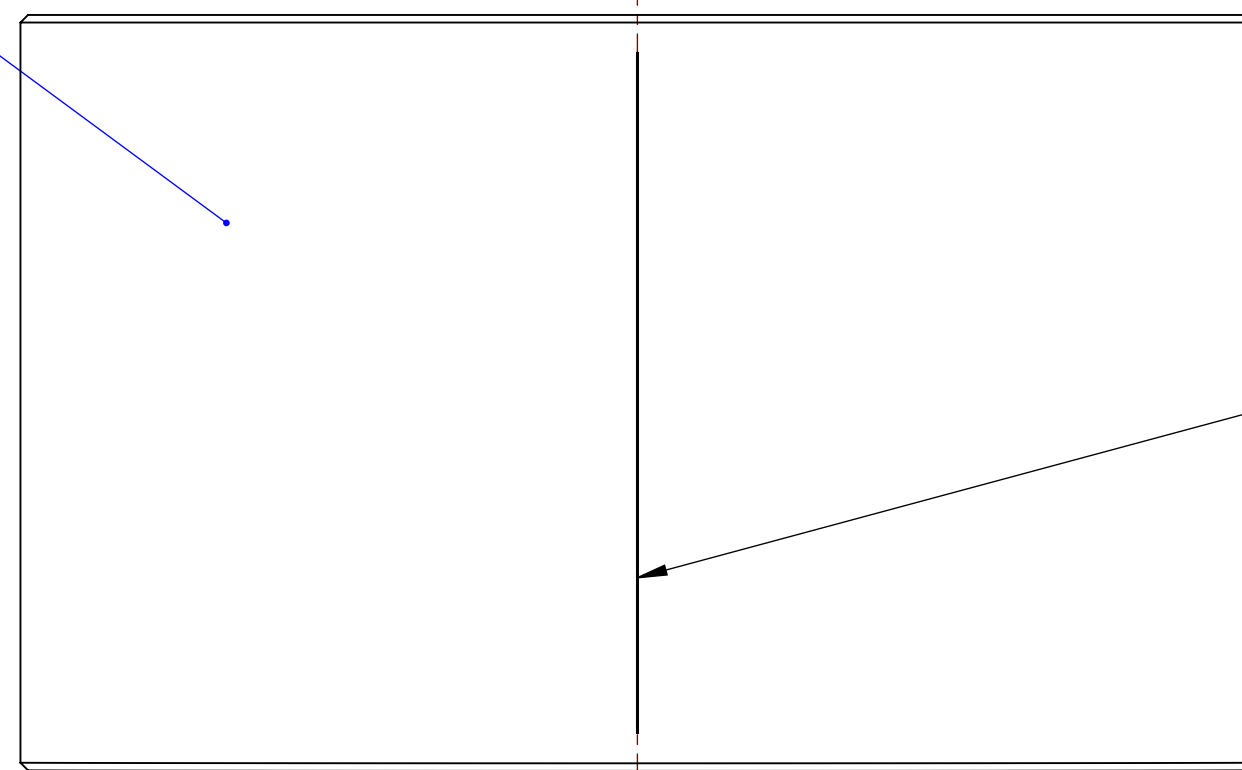
200.0^{+0.5}_{-1.0}

0.7°^{+0.03°}_{-0.00°}
 WEDGE ANGLE

BARREL (SIDE) AND BEVEL POLISH (SEE NOTE 3)

2X, ETCH OR GRIND LEGIBLE REFERENCE GROOVE (WIDTH 0.25mm ± 0.05mm) ALONG ϕ , PARALLEL TO THE CYLINDRICAL AXIS (DEFINED BY DATUM FEATURE -A-), REPEAT ON SURFACE 'S4' WITHIN ±0.1mm

ETCH OR GRIND LEGIBLE REFERENCE GROOVE (0.25mm ± 0.05mm WIDE) ALONG ϕ WITHIN ±1° CLOCKING ANGLE (WITH RESPECT TO DATUM FEATURE -A-), PARALLEL TO THE CYLINDRICAL AXIS (DEFINED BY DATUM FEATURE -A-), WITHIN ±0.1mm



BOTTOM VIEW

MANUFACTURE NOTES:

- DO NOT SCALE FROM DRAWING.
- INTERPRET DRAWING AS PER ANSI Y14.5M 1994.
- BARREL (SIDE) AND BEVEL POLISH PER E080511.
- FINISH SURFACES 'S1' AND 'S2' AS PER E080511.
- FINISH (FLAT) SURFACES 'S3' AND 'S4' AS PER E080511.
- FINISH CROSS HATCHED AREA ON 'S3' & 'S4' AS PER E080511.
- REFER TO E080511 FOR MORE INFORMATION ON SERIAL NUMBER.
- INTENDED TO CAPTURE ALLOWABLE WEDGE ANGLE CLOCKING TOLERANCE OF ±5°.
- APPLY COATING PER E0900041.

PARTS LIST

DIMENSIONS ARE IN MILLIMETERS		LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
TOLERANCES:		SYSTEM	ADVANCED LIGO
X ± 0.1		SUB-SYSTEM	COC
XX ± 0.05		NEXT ASSY	ITM
ANGULAR ± 0.1°			

MATERIAL:	REF E080031-v1	PART NAME	ITM SUBSTRATE
FINISH	SEE NOTES		
DRAWN	C. TORRE 14 Nov 08	SIZE	DWG. NO.
CHECKED	D. COFFE 19 Nov 08		D080657
APPROVED	D. COFFE 14 Dec 08	SCALE	1:2
		PROJECTION	1ST ANGLE