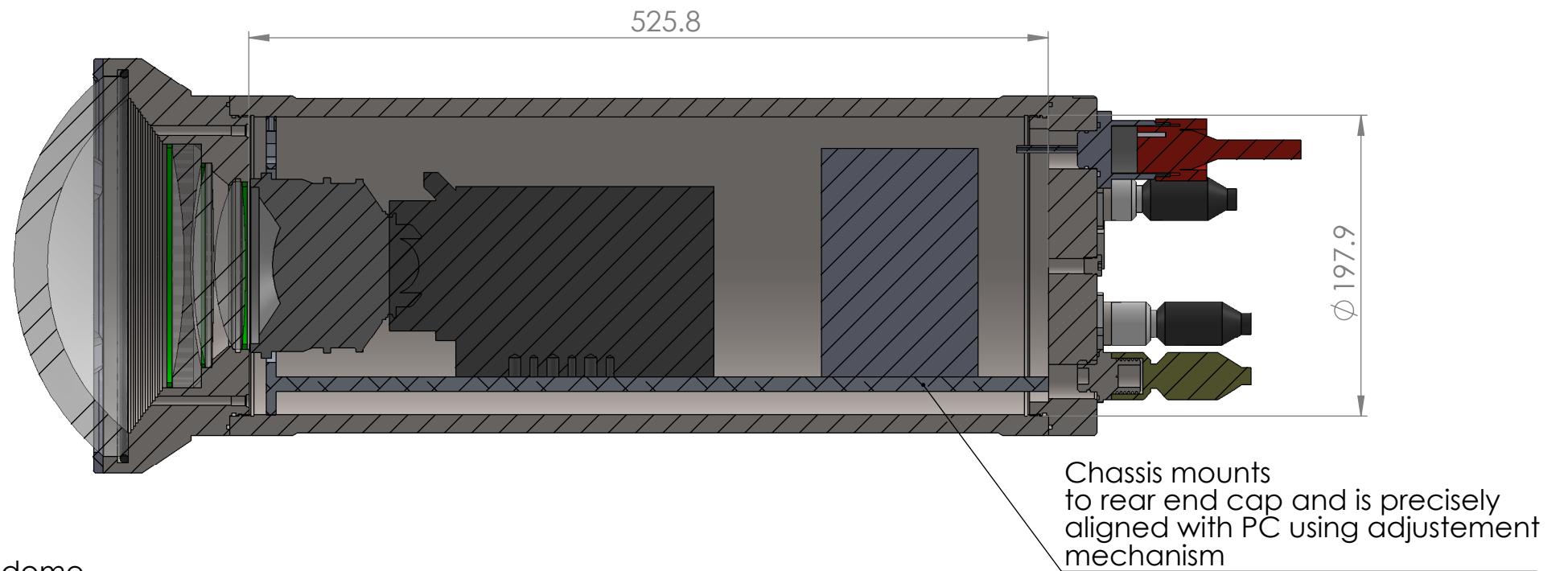
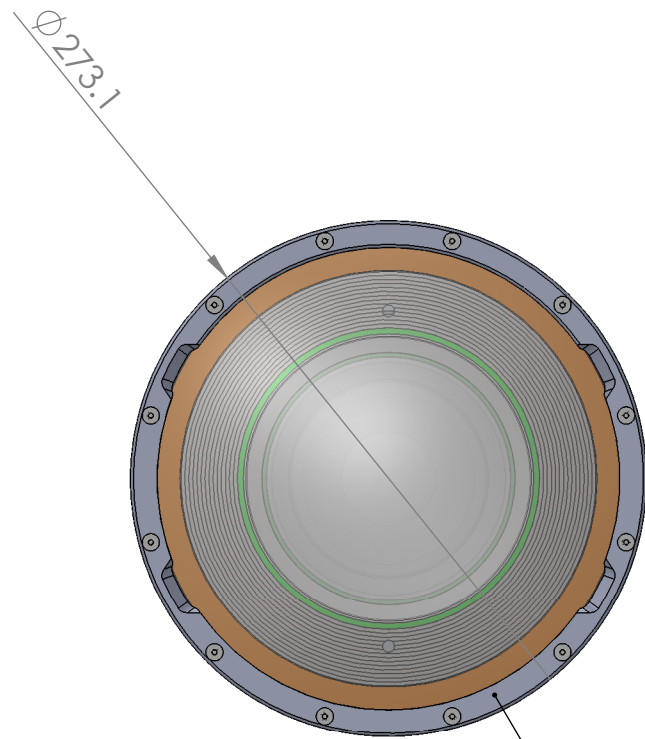
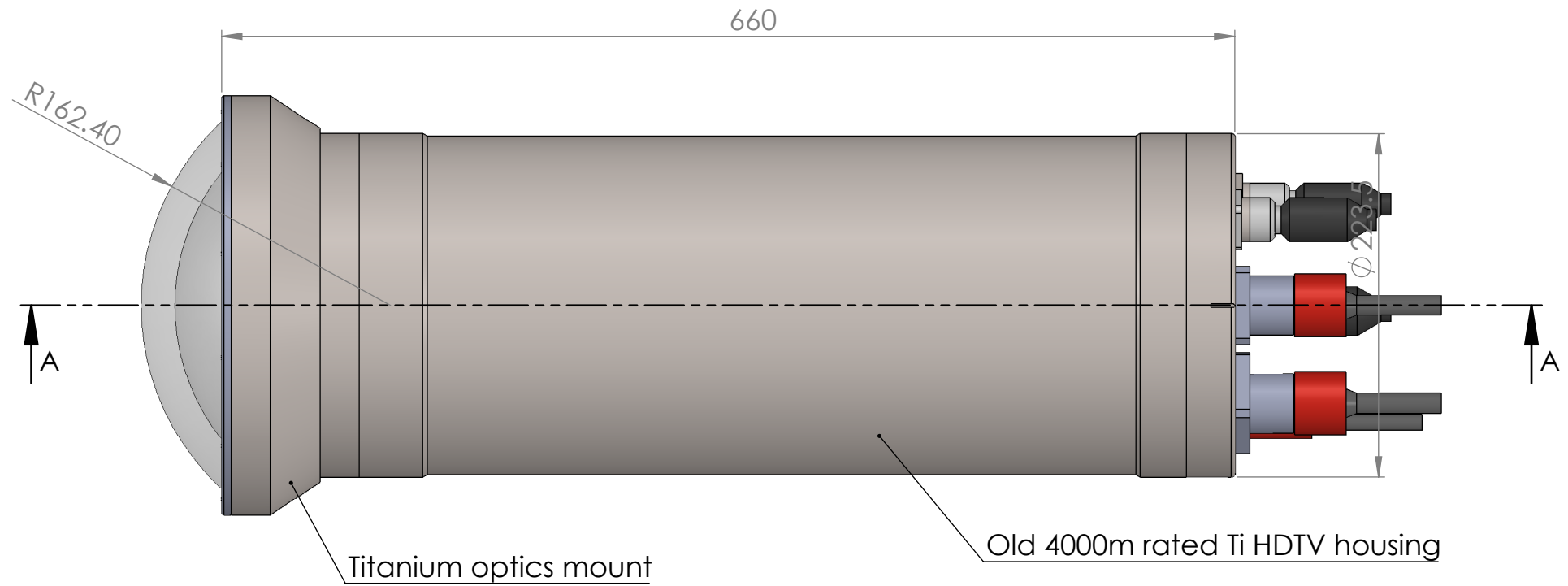


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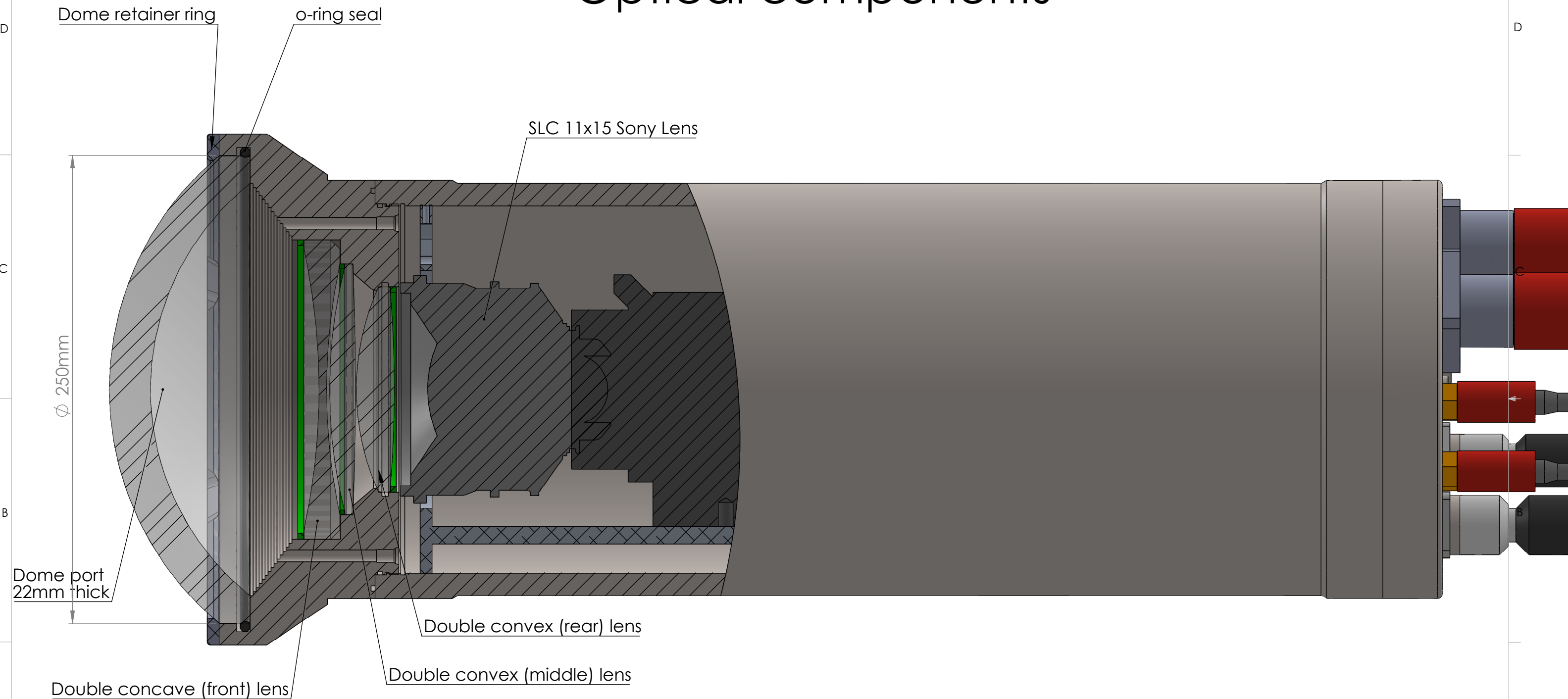


Mass = 102 lb

SECTION A-A
SCALE 1 : 4

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:				APPROVALS	DATE	Monterey Bay Aquarium Research Institute		
1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°	DRAWN Francois Cazenave				
1. DIMENSIONS ARE IN INCHES				ENGINEER Francois Cazenave		MBARI 7700 Sandholdt RD. Moss Landing, CA 95039 PH: (831) 775-1700		
2. DIMENSION LIMITS HELD AFTER PLATING.				CHECKED				
3. REMOVE BURRS AND SHARP EDGES .015 MAX.				PROJECT NO.		I2Map_Camera_Housing_Assembly		
4. MACHINED FILLET RADII .0150-.030.				PROJECT				
5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005						SIZE B	DWG. NO.	REV.
6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH. MAX .012 INCHES FOR SINGLE SURFACE.				DO NOT SCALE DRAWING	WEIGHT 100.36 lb.	SCALE 1:5		SHEET 1 OF 5

Optical components



UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:				APPROVALS	DATE	Monterey Bay Aquarium Research Institute		
1 PLACE DIM $\pm 1/16$	2 PLACE DIM $\pm .02$	3 PLACE DIM $\pm .005$	ANGLES $\pm 1^\circ$	DRAWN	Francois Cazenave			
1. DIMENSIONS ARE IN INCHES 2. DIMENSION LIMITS HELD AFTER PLATING. 3. REMOVE BURRS AND SHARP EDGES .015 MAX. 4. MACHINED FILLET RADII .0150-.030. 5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005 6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH, MAX .012 INCHES FOR SINGLE SURFACE.				ENGINEER	Francois Cazenave	MBARI 7700 Sandholdt RD. Moss Landing, CA 95039 PH: (831) 775-1700		
				CHECKED				
				PROJECT NO.		I2Map_Camera_Housing_Assembly		
				PROJECT				
DO NOT SCALE DRAWING				WEIGHT 100.36 lb.		SIZE B	DWG. NO.	REV.
						SCALE 1:5		SHEET 2 OF 5

3/16" EPDM o-ring.
A70 durometer.
Seals and centers dome
The o-ring is placed so that hydrostatic pressure is exerted to the edge of the port, helping reduce deformation of dome and of titanium retainer. This position also prevents o-ring extrusion.

Chamfer is intentionally small to avoid reducing contact area between dome and kapton ring, and to minimize o-ring deformation.

Clearance is large enough to avoid metal to glass contact during deformation, even at 2200 PSI (1500m)

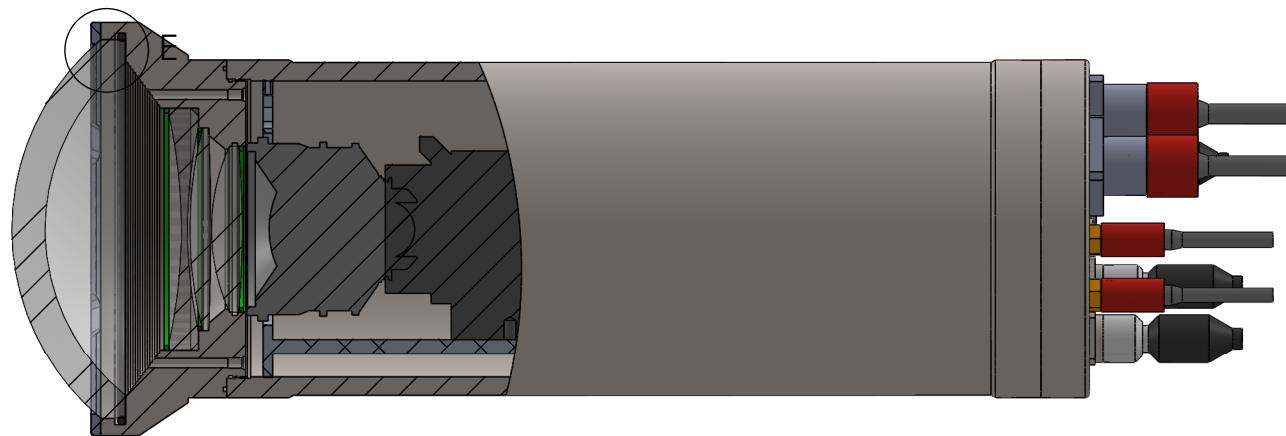
5 mil Kapton (polyimide) ring (possibly adhesive backed).
Helps distribute load between glass and metal

Retainer is held by 12 screws
and can be used to insert dome in position

Contact pressure at 1500m depth: 10KSI assuming even distribution. Pressure will likely be higher on inner edge.

DETAIL E
SCALE 2 : 1

Dome port seal details



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1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°	DRAWN	Francois Cazenave	MBARI 7700 Sandholdt RD. Moss Landing, CA 95039 PH: (831) 775-1700		
1. DIMENSIONS ARE IN INCHES				ENGINEER	Francois Cazenave			
2. DIMENSION LIMITS HELD AFTER PLATING.				CHECKED		I2Map_Camera_Housing_Assembly		
3. REMOVE BURRS AND SHARP EDGES .015 MAX.				PROJECT NO.				
4. MACHINED FILLET RADII .0150-.030.				PROJECT		SIZE B	DWG. NO.	REV.
5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005				DO NOT SCALE DRAWING			SCALE 1:5	SHEET 3 OF 5
6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH, MAX .012 INCHES FOR SINGLE SURFACE.				WEIGHT 100.36 lb.				

Panoramic converter details

Clearances between lenses OD and mount ID to allow lenses to center themselves on retainers

SAE ports: can be used to flush dome cavity with nitrogen and to seal it.

clearance allows lens to 'float' on spacer

Machined surfaces provide tight tolerance between optical surfaces of middle and rear lenses

Aluminum spacer provides tigh tolerance between optical surfaces of front and middle lens

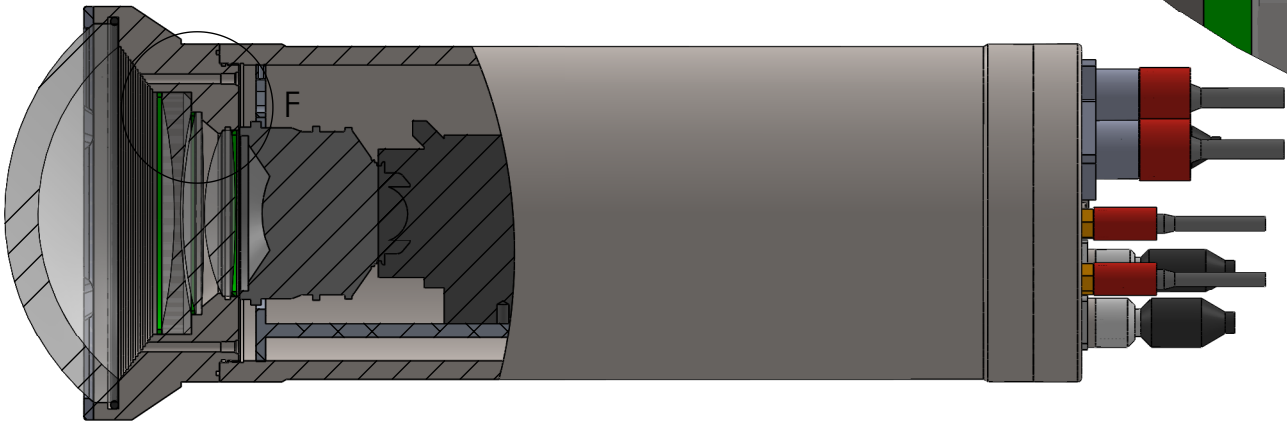
aluminum threaded ring holds lenses in place

threaded retainer for rear lens .

O-ring groove to seal lens assembly

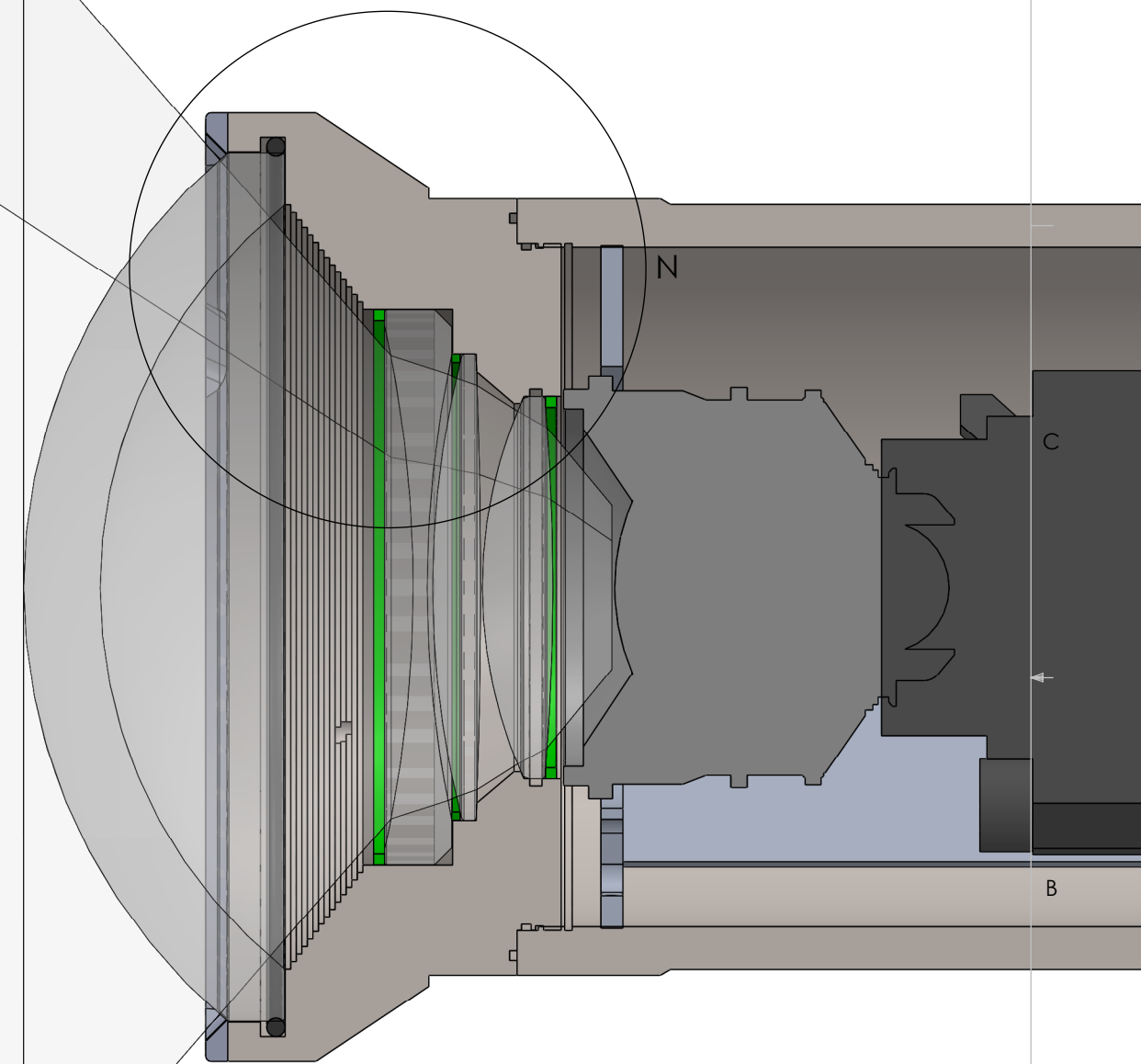
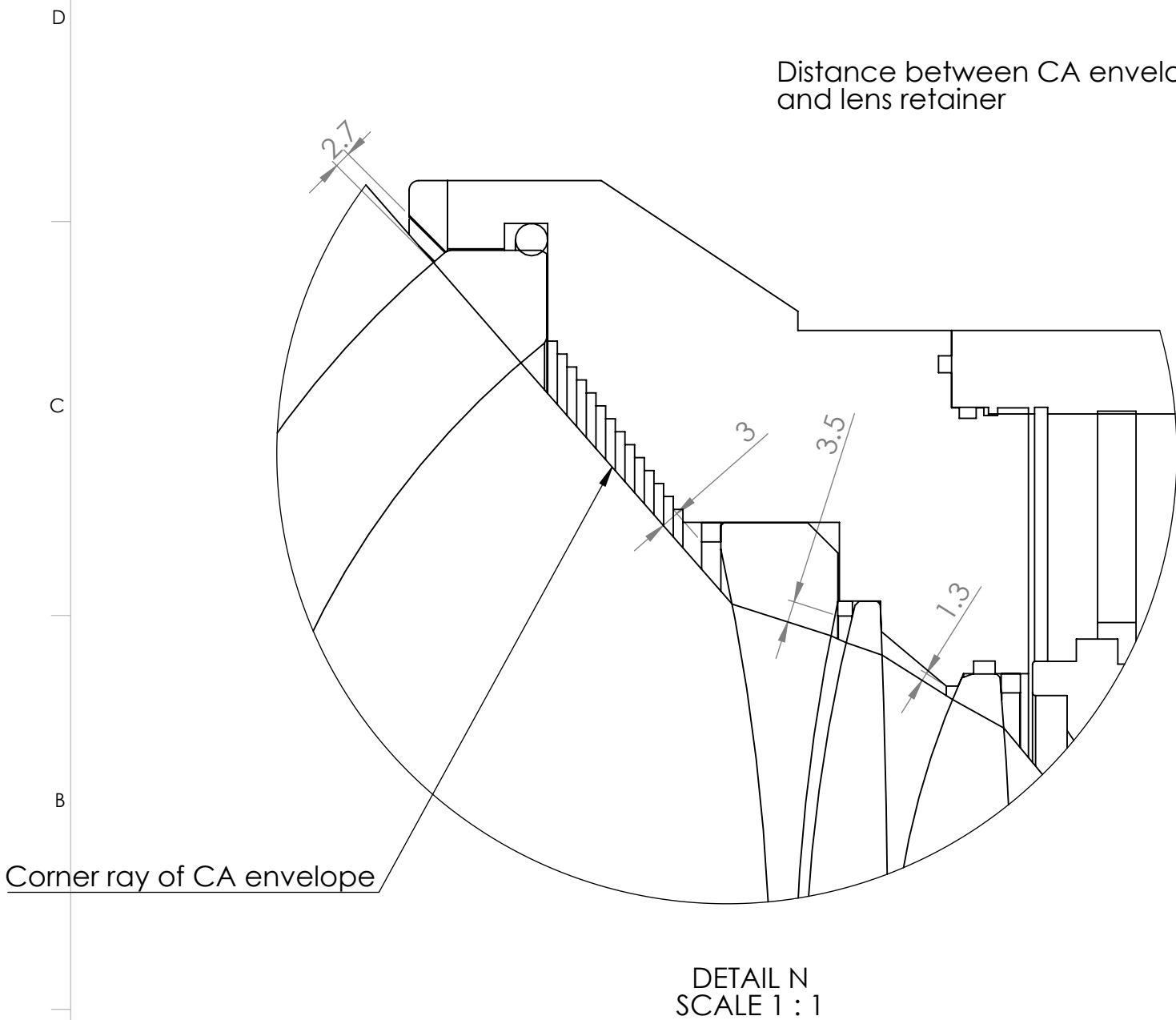
Rear lens is mounted from rear side

DETAIL F
SCALE 2 : 1



UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:				APPROVALS	DATE	Monterey Bay Aquarium Research Institute		
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1. DIMENSIONS ARE IN INCHES				ENGINEER Francois Cazenave				
2. DIMENSION LIMITS HELD AFTER PLATING.				CHECKED		I2Map_Camera_Housing_Assembly		
3. REMOVE BURRS AND SHARP EDGES .015 MAX.				PROJECT NO.				
4. MACHINED FILLET RADII .0150-.030.				PROJECT		SIZE B		
5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005								
6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH, MAX .012 INCHES FOR SINGLE SURFACE.						SCALE	DWG. NO.	REV.
DO NOT SCALE DRAWING				WEIGHT 100.36 lb.		1:5		
								SHEET 4 OF 5

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Clear aperture details

Section view on field of view diagonal

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1. DIMENSIONS ARE IN INCHES 2. DIMENSION LIMITS HELD AFTER PLATING. 3. REMOVE BURRS AND SHARP EDGES .015 MAX. 4. MACHINED FILLET RADII .0150-.030. 5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005 6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH, MAX .012 INCHES FOR SINGLE SURFACE.				ENGINEER Francois Cazenave				
				CHECKED		I2Map_Camera_Housing_Assembly		
				PROJECT NO.				
				PROJECT				
DO NOT SCALE DRAWING				WEIGHT 100.36 lb.		SIZE B	DWG. NO.	REV.
						SCALE 1:5		SHEET 5 OF 5