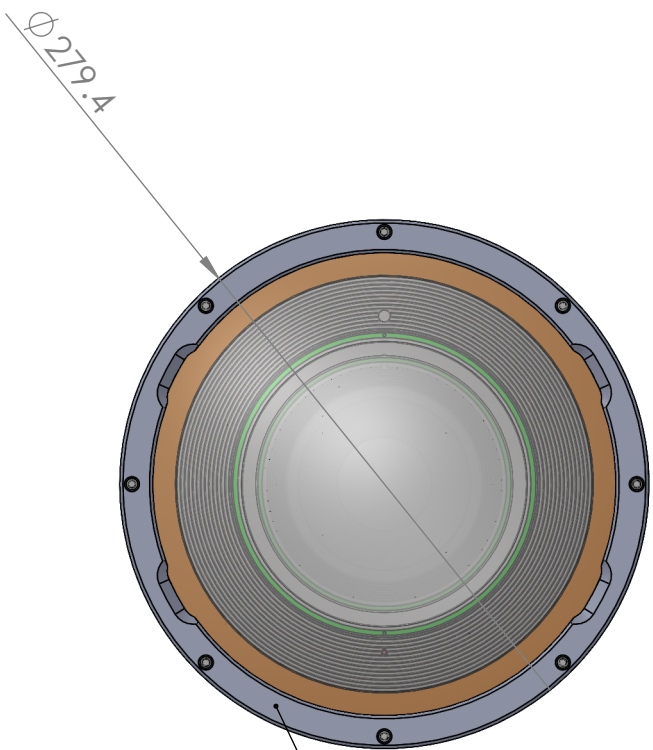
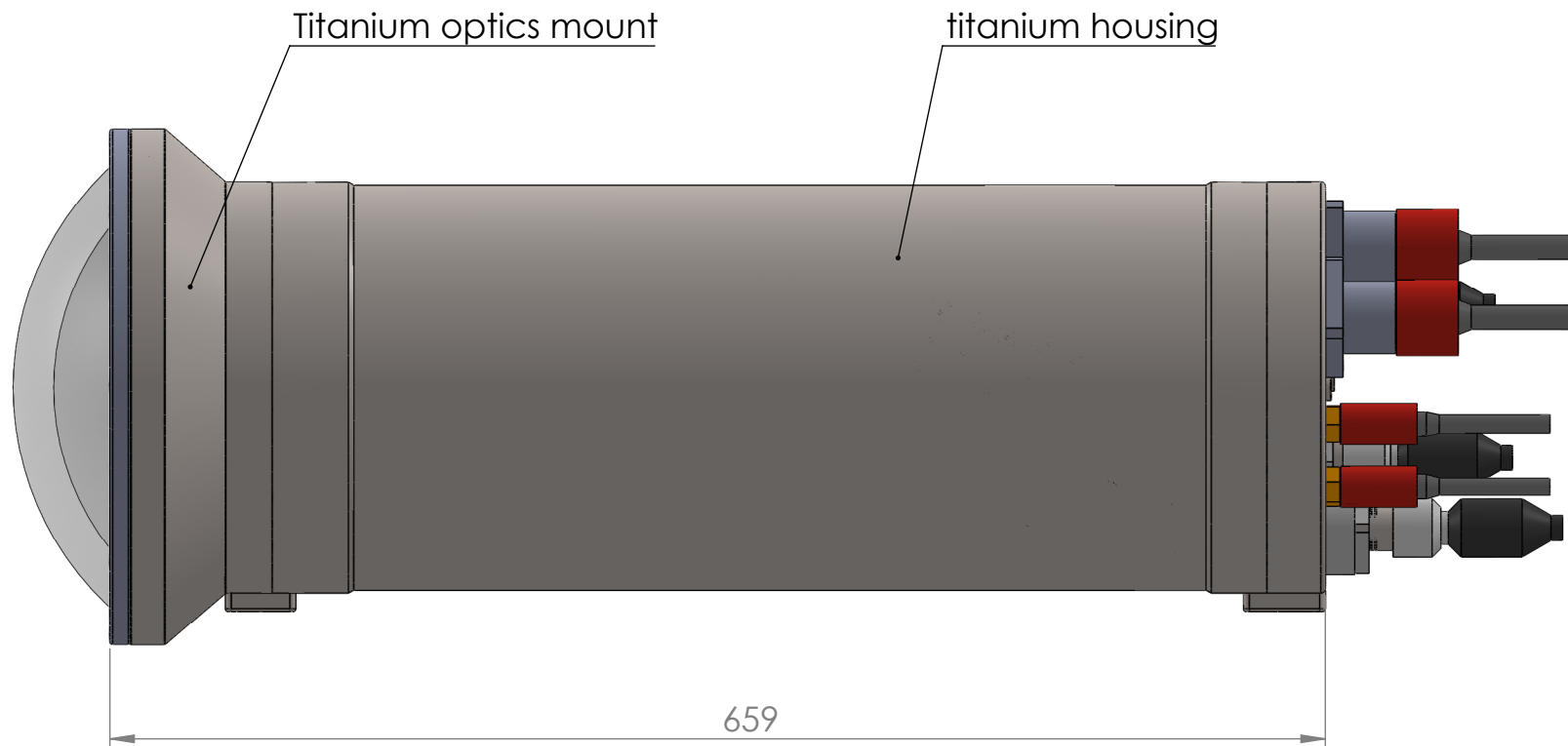
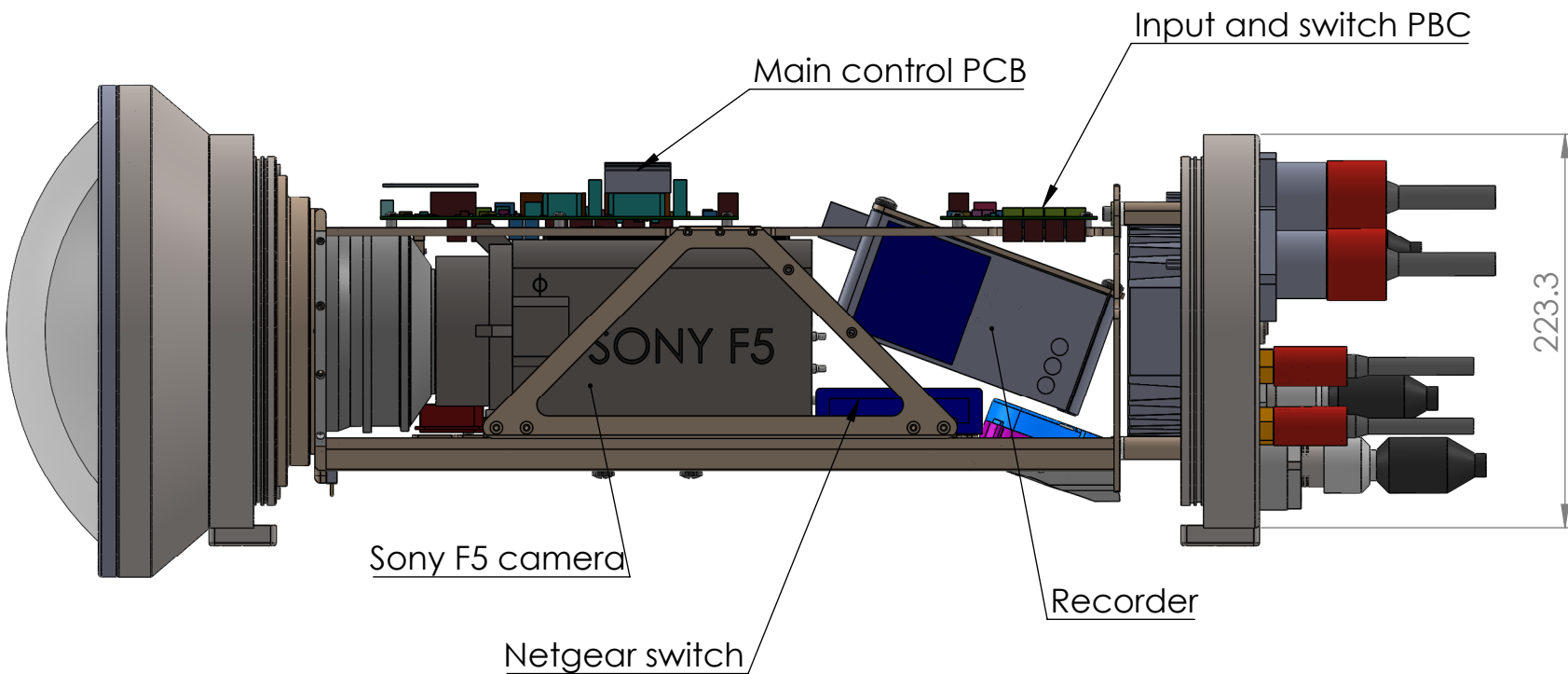


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Plastic retainer for dome

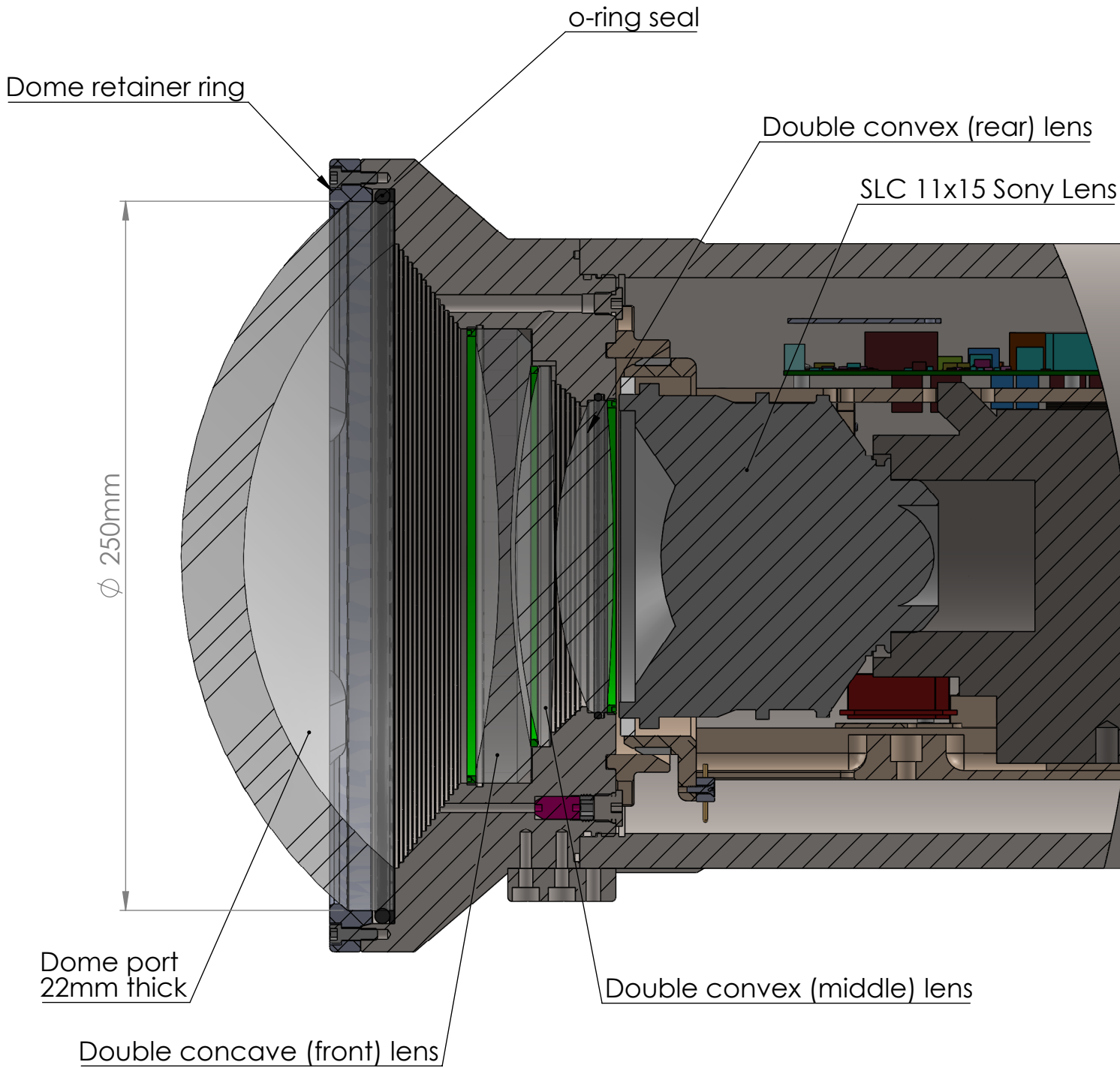


Mass = 103 lb

| UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:                                                                |                          |                           |                         | APPROVALS            | DATE              | Monterey Bay Aquarium Research Institute<br><b>MBARI</b><br>7700 Sandholdt RD.<br>Moss Landing, CA 95039<br>PH: (831) 775-1700 |          |      |
|-----------------------------------------------------------------------------------------------------------|--------------------------|---------------------------|-------------------------|----------------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------|----------|------|
| 1 PLACE DIM<br>$\pm 1/16$                                                                                 | 2 PLACE DIM<br>$\pm .02$ | 3 PLACE DIM<br>$\pm .005$ | ANGLES<br>$\pm 1^\circ$ | DRAWN                | Francois Cazenave |                                                                                                                                |          |      |
| 1. DIMENSIONS ARE IN INCHES                                                                               |                          |                           |                         | ENGINEER             | Francois Cazenave | I2Map_Camera_Housing_Assembly                                                                                                  |          |      |
| 2. DIMENSION LIMITS HELD AFTER PLATING.                                                                   |                          |                           |                         | CHECKED              |                   |                                                                                                                                |          |      |
| 3. REMOVE BURRS AND SHARP EDGES .015 MAX.                                                                 |                          |                           |                         | PROJECT NO.          |                   | SIZE<br>B                                                                                                                      |          |      |
| 4. MACHINED FILLET RADII .0150-.030.                                                                      |                          |                           |                         | PROJECT              |                   |                                                                                                                                |          |      |
| 5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005                                       |                          |                           |                         | WEIGHT 103.05 lb.    |                   | SCALE 1:5                                                                                                                      | DWG. NO. | REV. |
| 6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH, MAX .012 INCHES FOR SINGLE SURFACE. |                          |                           |                         | DO NOT SCALE DRAWING |                   | SHEET 1 OF 5                                                                                                                   |          |      |

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# Optical components



| UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:                                                                |                     |                      |               | APPROVALS                     | DATE | Monterey Bay Aquarium Research Institute<br><b>MBARI</b><br>7700 Sandholdt RD.<br>Moss Landing, CA 95039<br>PH: (831) 775-1700 |  |  |
|-----------------------------------------------------------------------------------------------------------|---------------------|----------------------|---------------|-------------------------------|------|--------------------------------------------------------------------------------------------------------------------------------|--|--|
| 1 PLACE DIM<br>±1/16                                                                                      | 2 PLACE DIM<br>±.02 | 3 PLACE DIM<br>±.005 | ANGLES<br>±1° | DRAWN<br>Francois Cazenave    |      |                                                                                                                                |  |  |
| 1. DIMENSIONS ARE IN INCHES                                                                               |                     |                      |               | ENGINEER<br>Francois Cazenave |      | I2Map_Camera_Housing_Assembly                                                                                                  |  |  |
| 2. DIMENSION LIMITS HELD AFTER PLATING.                                                                   |                     |                      |               | CHECKED                       |      |                                                                                                                                |  |  |
| 3. REMOVE BURRS AND SHARP EDGES .015 MAX.                                                                 |                     |                      |               | PROJECT NO.                   |      | SIZE<br>B                                                                                                                      |  |  |
| 4. MACHINED FILLET RADII .0150-.030.                                                                      |                     |                      |               | PROJECT                       |      |                                                                                                                                |  |  |
| 5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005                                       |                     |                      |               |                               |      | SCALE 1:5                                                                                                                      |  |  |
| 6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH, MAX .012 INCHES FOR SINGLE SURFACE. |                     |                      |               |                               |      |                                                                                                                                |  |  |
| DO NOT SCALE DRAWING                                                                                      |                     |                      |               | WEIGHT 103.05 lb.             |      | REV.                                                                                                                           |  |  |
|                                                                                                           |                     |                      |               |                               |      | 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.

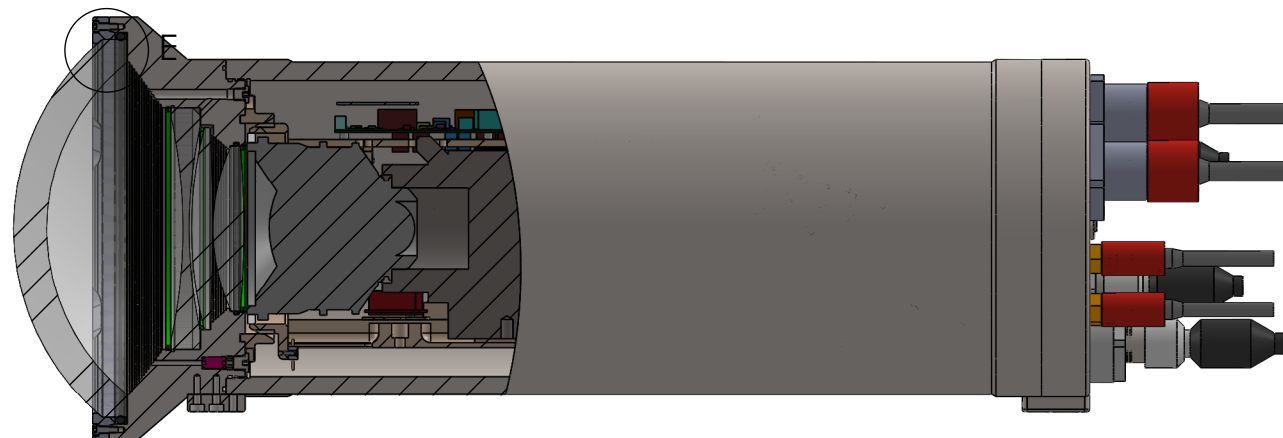
Retainer is held by 12 screws  
and can be used to insert dome in position

5 mil Kapton (polyimide) ring helps distribute load  
between glass and metal.

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

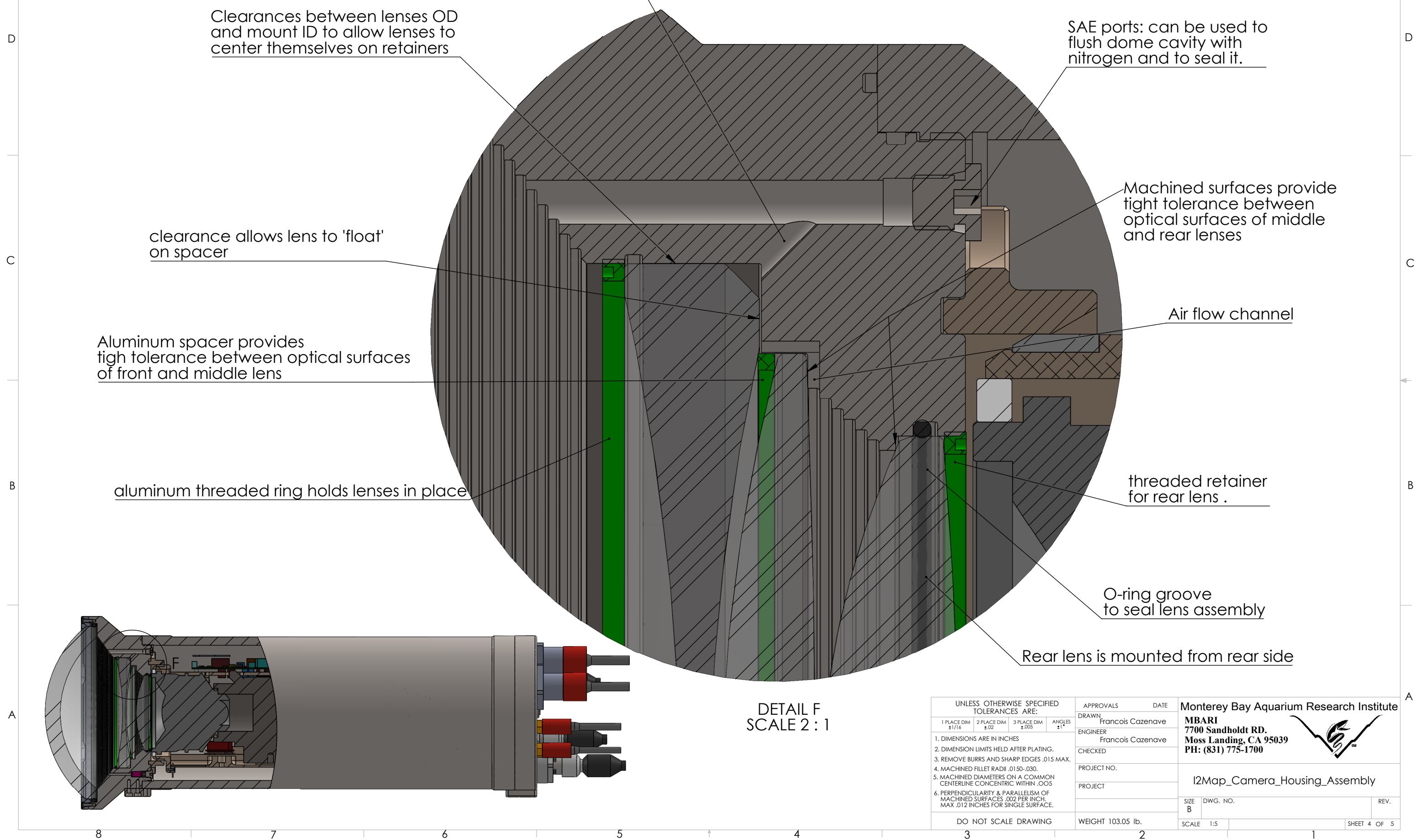
DETAIL E  
SCALE 2 : 1

## Dome port seal details



| UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:                                                                |                     |                      |               | APPROVALS                     | DATE | Monterey Bay Aquarium Research Institute                                           |  |  |
|-----------------------------------------------------------------------------------------------------------|---------------------|----------------------|---------------|-------------------------------|------|------------------------------------------------------------------------------------|--|--|
| 1 PLACE DIM<br>±1/16                                                                                      | 2 PLACE DIM<br>±.02 | 3 PLACE DIM<br>±.005 | ANGLES<br>±1° | DRAWN<br>Francois Cazenave    |      | <b>MBARI</b><br>7700 Sandholdt RD.<br>Moss Landing, CA 95039<br>PH: (831) 775-1700 |  |  |
| 1. DIMENSIONS ARE IN INCHES                                                                               |                     |                      |               | ENGINEER<br>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                                       |                     |                      |               |                               |      | DWG. NO.                                                                           |  |  |
| 6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH. MAX .012 INCHES FOR SINGLE SURFACE. |                     |                      |               |                               |      | REV.                                                                               |  |  |
| DO NOT SCALE DRAWING                                                                                      |                     |                      |               | WEIGHT 103.05 lb.             |      | SCALE 1:5                                                                          |  |  |
|                                                                                                           |                     |                      |               |                               |      | SHEET 3 OF 5                                                                       |  |  |

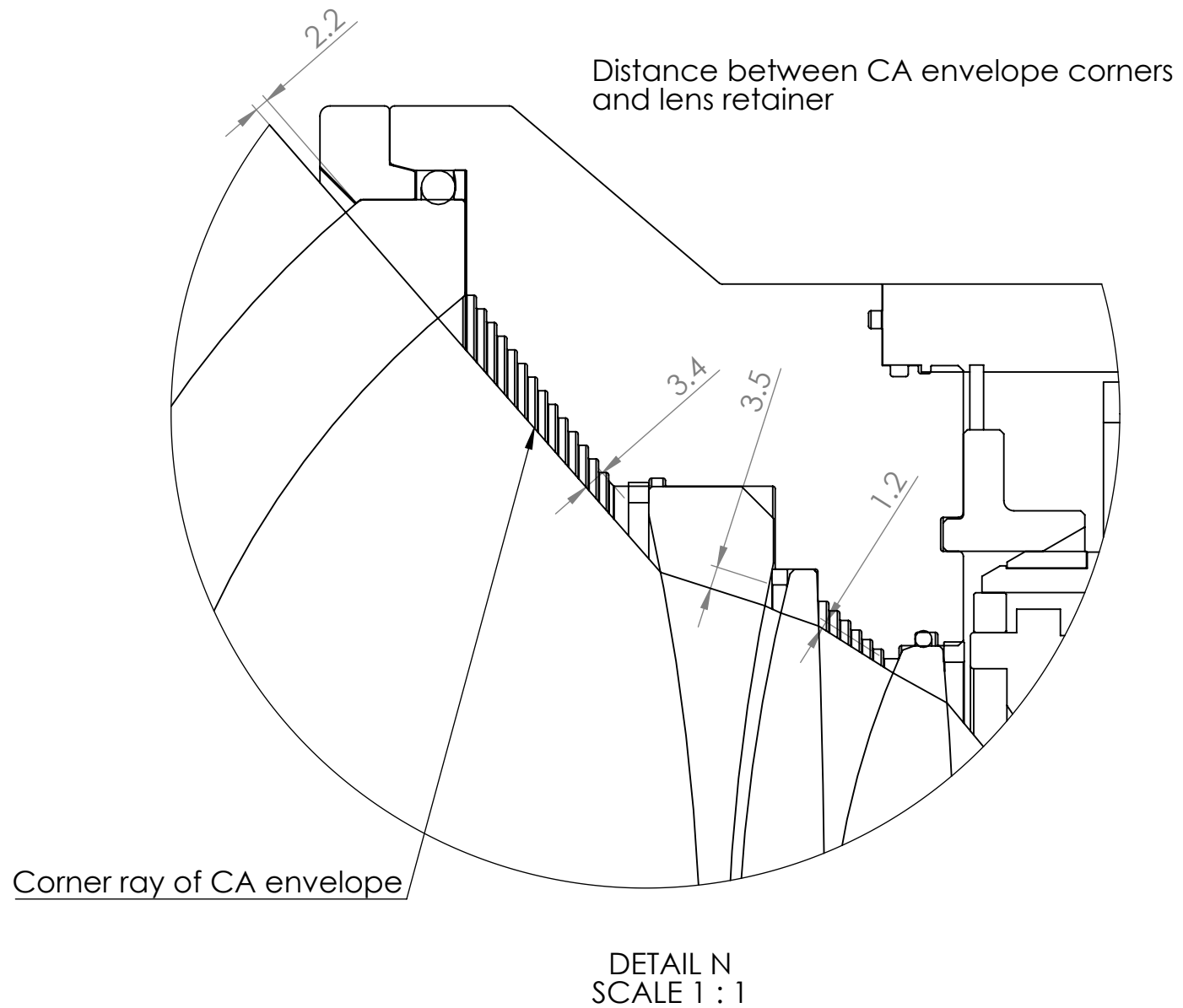
# Optical assembly details



DETAIL F  
SCALE 2 : 1

|                                                                                                                 |                     |                      |                               |  |                                                                                                                                                                                                                                                  |  |
|-----------------------------------------------------------------------------------------------------------------|---------------------|----------------------|-------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| UNLESS OTHERWISE SPECIFIED<br>TOLERANCES ARE:                                                                   |                     |                      | APPROVALS                     |  | DATE                                                                                                                                                                                                                                             |  |
| 1 PLACE DIM<br>±1/16                                                                                            | 2 PLACE DIM<br>±.02 | 3 PLACE DIM<br>±.005 | DRAWN<br>Francois Cazenave    |  | <b>Monterey Bay Aquarium Research Institute</b><br><b>MBARI</b><br><b>7700 Sandholdt RD.</b><br><b>Moss Landing, CA 95039</b><br><b>PH: (831) 775-1700</b>  |  |
| 1. DIMENSIONS ARE IN INCHES                                                                                     |                     |                      | ENGINEER<br>Francois Cazenave |  |                                                                                                                                                                                                                                                  |  |
| 2. DIMENSION LIMITS HELD AFTER PLATING.                                                                         |                     |                      | CHECKED                       |  |                                                                                                                                                                                                                                                  |  |
| 3. REMOVE BURRS AND SHARP EDGES .015 MAX.                                                                       |                     |                      | PROJECT NO.                   |  |                                                                                                                                                                                                                                                  |  |
| 4. MACHINED FILLET RADII .0150-.030.                                                                            |                     |                      | PROJECT                       |  |                                                                                                                                                                                                                                                  |  |
| 5. MACHINED DIAMETERS ON A COMMON<br>CENTERLINE CONCENTRIC WITHIN .005                                          |                     |                      |                               |  | <b>I2Map_Camera_Housing_Assembly</b><br><br><div> <div>SHEET</div> <div>SIZE B</div> <div>DWG. NO.</div> <div>REV.</div> </div>                                                                                                                  |  |
| 6. PERPENDICULARITY & PARALLELISM OF<br>MACHINED SURFACES .002 PER INCH.<br>MAX .012 INCHES FOR SINGLE SURFACE. |                     |                      |                               |  |                                                                                                                                                                                                                                                  |  |
| DO NOT SCALE DRAWING                                                                                            |                     |                      |                               |  |                                                                                                                                                                                                                                                  |  |
| WEIGHT 103.05 lb.                                                                                               |                     |                      | SCALE 1:5                     |  | SHEET 4 OF 5                                                                                                                                                                                                                                     |  |

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# Clear aperture details

## Section view on field of view diagonal

| UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:                                                                |                     |                      |               | APPROVALS            | DATE              | Monterey Bay Aquarium Research Institute<br><b>MBARI</b><br>7700 Sandholdt RD.<br>Moss Landing, CA 95039<br>PH: (831) 775-1700 |          |      |
|-----------------------------------------------------------------------------------------------------------|---------------------|----------------------|---------------|----------------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------|----------|------|
| 1 PLACE DIM<br>±1/16                                                                                      | 2 PLACE DIM<br>±.02 | 3 PLACE DIM<br>±.005 | ANGLES<br>±1° | DRAWN                |                   |                                                                                                                                |          |      |
| 1. DIMENSIONS ARE IN INCHES                                                                               |                     |                      |               | ENGINEER             | Francois Cazenave | I2Map_Camera_Housing_Assembly                                                                                                  |          |      |
| 2. DIMENSION LIMITS HELD AFTER PLATING.                                                                   |                     |                      |               | CHECKED              |                   |                                                                                                                                |          |      |
| 3. REMOVE BURRS AND SHARP EDGES .015 MAX.                                                                 |                     |                      |               | PROJECT NO.          |                   | SIZE<br>B                                                                                                                      |          |      |
| 4. MACHINED FILLET RADII .0150-.030.                                                                      |                     |                      |               | PROJECT              |                   |                                                                                                                                |          |      |
| 5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005                                       |                     |                      |               | WEIGHT 103.05 lb.    |                   | SCALE 1:5                                                                                                                      | DWG. NO. | REV. |
| 6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH, MAX .012 INCHES FOR SINGLE SURFACE. |                     |                      |               | DO NOT SCALE DRAWING |                   | SHEET 5 OF 5                                                                                                                   |          |      |