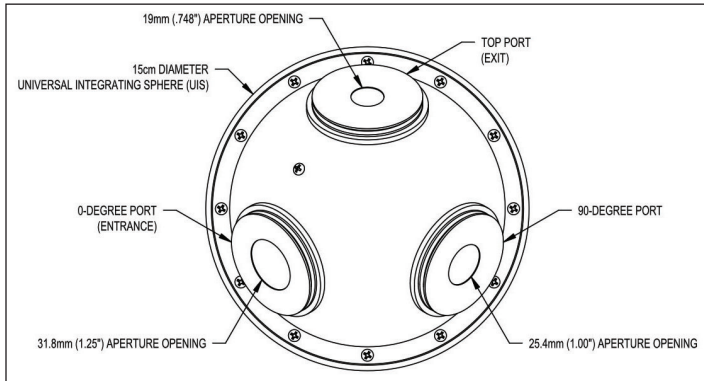


# UNIVERSAL INTEGRATING SPHERE (UIS) SERIES



The Universal Integrating Sphere Series was designed to accommodate a wide variety of configuration and application requirements. Various combinations of coatings, number of ports, and port diameters can be coupled with a variety of accessories and adapters. Users can tailor a sphere to meet their specific needs or modify it as their requirements change.

## SPHERE SIZES

- 10 cm (4") with a 25.4 cm (1") entrance aperture and a 15 mm (.59") exit port aperture opening
- 15 cm (6") with a 31.8 cm (1.25") entrance aperture and a 19 mm (.75") exit port aperture opening
- 25 cm (10") with a 50.8 cm (2") entrance aperture and a 19 mm (.75") exit port aperture opening

## NUMBER OF PORTS

- 3 ports – two (2) ports on the equator at 0° and 90°, and one port at the top
- 4 ports – three (3) ports on the equator at 0°, 90°, and 270°, and one port at the top

## PORT DESIGN

- Circular port with a flat front face with a near knife-edge aperture opening
- V-grooved on the outside diameter for the mounting of accessories and adapters

## SPHERE COATINGS

- Optolon 2<sup>TM</sup>
- Gold
- PTFE

## MOUNTING PORTS

A mounting port located at the bottom of the 10 cm and 15 cm diameter spheres have 6-32 tapped holes so that the assembly can be attached to an optional support base or fixture plate, and a ¼-20 tapped hole for use with a support rod. The 25 cm diameter sphere will be provided with a support base

## BAFFLES

A standard internal baffle positioned between the 0° port and the top port is supplied. Additional internal baffles can be purchased and factory-installed as needed.

## SPHERE FINISH

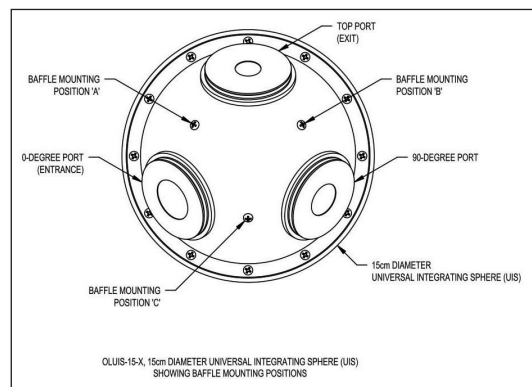
The outside surface of the sphere is painted black with a pebble textured finish, except for gold plated spheres. All ports are black anodized.

When ordering a Universal Integrating Sphere (UIS), it is necessary to specify the baffle to be installed into the sphere. The information below can be used to determine the correct baffle style and position of the baffle(s) required.

## BAFFLE POSITIONS

There are three (3) different positions on the sphere to attach a baffle. The baffle(s) are installed at the factory, and its position must be specified when ordering. The three (3) baffle attachment positions are shown in the figure below.

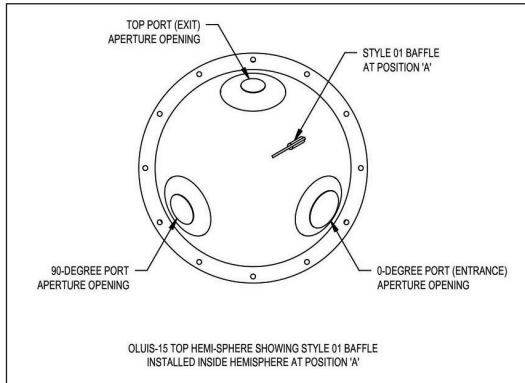
Figure 1 – Baffle Attachment Positions on the Top Hemisphere



## STYLE 01 BAFFLE

The style 01 baffle can be installed into any of the three (3) positions (A, B, or C). The baffle is designed to block direct light from port-to-port. Its mounting position must be specified when ordering. The figure below shows the baffle properly installed inside the hemisphere.

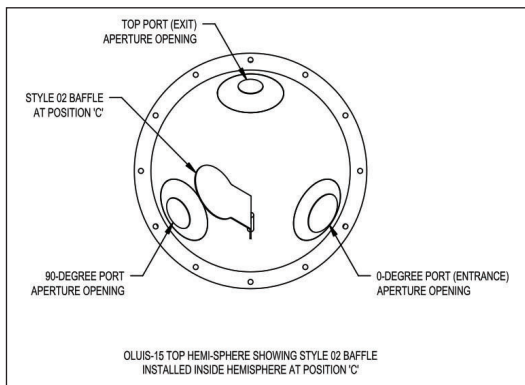
Figure 2 – Style 01 Baffle Installed at Position 'A'



## STYLE 02 BAFFLE

The style 02 baffle can be installed into position 'C'. The baffle is designed to block direct light between two adjacent ports and provides a circular baffle perpendicular to the 90-degree port's optical axis for up to an f/1 viewing angle. The baffle's mounting position must be specified when ordering. The figure below shows the baffle properly installed inside the hemisphere.

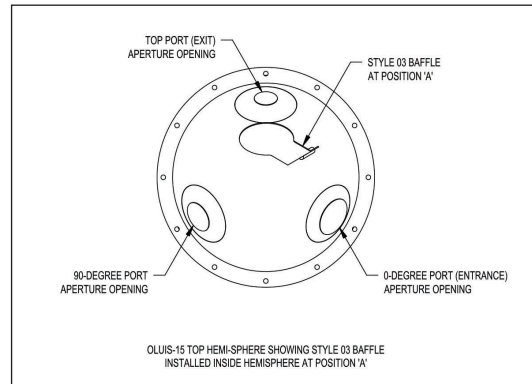
Figure 3 – Style 02 Baffle Installed at Position 'C'



## STYLE 03 BAFFLE

The style 03 baffle can be installed into position 'A'. The baffle is designed to block direct light between two adjacent parts and provides a circular baffle perpendicular to the top port's optical axis for up to an f/1 viewing angle. The baffle's mounting position must be specified when ordering. The figure below shows the baffle properly installed inside the hemisphere.

Figure 3 – Style 03 Baffle Installed at Position 'C'



Data sheet: B148 Nov 2018

As part of our policy of continuous product improvement, we reserve the right to change specifications at any time.