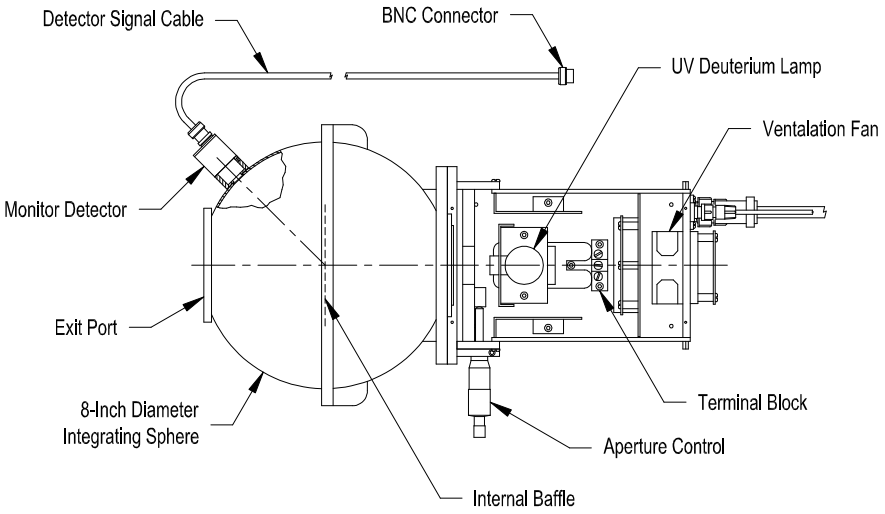
OL 440-8-OH
Variable Ultraviolet Integrating Sphere Calibration Standard

The OL 440-8-OH Variable Ultraviolet Integrating Sphere Calibration Standard is designed for accurately calibrating microphotometers, image intensifiers, telephotometers, and imaging spectroradiometers for measuring spectral radiance. It is a large area, uniform, diffusely radiating source with a near normal luminance that can be varied over many decades. The OL 440-8-OH consists of a source module/optics head and a separate electronic display console and power supply (OL 46D Controller). This enables remote location of either unit, which facilitates alignment or positioning of the source with respect to the device to be calibrated.

The source module has a high-brightness UV deuterium lamp with a micrometer-controlled aperture between the lamp and the integrating sphere. This combination provides for continuous adjustment of the sphere luminance over a range of 10^6. The integrating sphere is coated with a highly reflective, diffuse coating and produces a nearly perfect luminance source.

A precision silicon detector is mounted in the sphere wall and monitors the sphere luminance. The in-line sphere port concept with an intermediate spider baffle provides for exceptional uniformity across the radiating aperture. A shutter is located between the lamp and the entrance port of the integrating sphere. The location of the shutter ensures that any stray light (room light) entering the exit (radiating) port of the sphere is properly accounted for when zeroing the meter.

Spectral Range ..... 200 – 400 nm
Spectral Radiance Uncertainty (at 550 nm, k=2) ..... ± 2 % (relative to NIST)
Radiance Stability ..... ± 0.5% (after 15 minutes warm-up)
..... ± 4 % @ 350 nm, 100 hours of use or 1 year
..... ± 2 % @ 550 nm, 100 hours of use or 1 year
..... ± 3 % @ 1000 nm, 100 hours of use or 1 year
Exit (radiating) Port ..... 2.0 (50.8 mm) dia
Sphere Coating (reflectance) ..... > 99 % (350 nm to 1100 nm)
Sphere Monitor (built-In) ..... High-accuracy Silicon Detector



Wavelength	440801_09
nm	W/(sr cm²nm)
200	7.703E-09
210	8.411E-09
220	1.650E-08
230	1.994E-08
240	2.114E-08
250	2.032E-08
260	1.826E-08
270	1.742E-08
280	1.992E-08
290	2.353E-08
300	2.552E-08
310	2.639E-08
320	2.631E-08
330	2.575E-08
340	2.493E-08
350	2.333E-08
360	2.196E-08
370	2.080E-08
380	1.989E-08
390	1.875E-08
400	1.859E-08

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