

OL 458-4

White LED-Based Fixed Luminance Sphere Calibration Standard



OL 458 SHOWN WITH OL 458-MOUNT OPTIONAL ROTATIONAL MOUNTING SUPPORT

The OL 458-4 is a compact NIST-traceable integrating sphere calibration standard designed for accurately calibrating micro- and telephotometers, image intensifiers, or imaging photometers and colorimeters for photometric, radiometric, or spectroradiometric response.

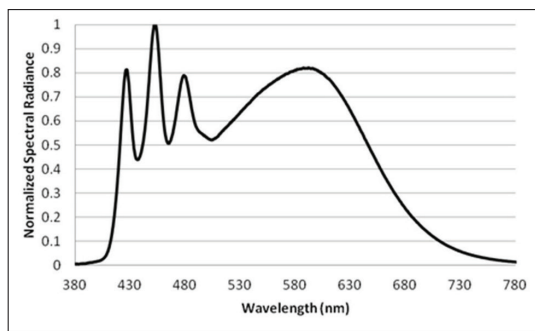
It serves as a highly accurate, uniform, stable, diffusely radiating source.

The OL 458-4 consists of an optics head and a power supply. This enables remote location of either unit, which facilitates alignment or positioning of the source with respect to an instrument.

The optics head has dual input sources with multiple LEDs in each source. The LEDs excite a phosphor allowing for a continuous spectrum across the visible range. The sources feed directly into a 4-inch diameter integrating sphere coated with our proprietary Optolon 2™ material, providing highly diffuse reflectance over the VIS/NIR wavelength range.

The OL 458-4 has an integrated constant current supply, which provides a constant current for luminance stability. The unit can be set up at our factory to run at either 500 or 15,000 cd/m². Other luminances can be requested as well.

The analog current supply runs on 48 Volts DC supplied by the provided AC adapter.



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

Design Features



- Continuous spectrum across the visible range
- Operation does not require a computer connection
- Coated with proprietary Optolon 2™ material
- Provided constant current for luminance stability
- LED-based source
- High stability/ temperature stabilized
- Fast warm-up
- Stable over wide ambient temperature range
- LED-status indicators
- USB connection for remote control
- Application software provided
- Internal hour meter tracks usage
- Extremely long lifetime
- Compact, portable size
- Rugged design

Application Features



- Calibration of imaging photometers/ colorimeters
- Audit source for field or factory calibration verifications

LUMINANCE UNCERTAINTY	
Size	5.2 L x 6.54 W x 6.05 H in <i>(13.2 L x 16.6 W x 15.4 H cm)</i>
Weight	3 lbs. <i>(1.4 kg)</i>
Power Requirements	48 VDC
AC Input Requirements	100-240 VAC, 50/60 Hz
Operating Temperature	0°C to 3.5°C <i>(0 to 90% RH, Non-condensing)</i>
PERFORMANCE	
Luminance Uncertainty	±0.5% Relative to NIST
Fixed Luminance Output Options	500 or 15,000 cd/m ²
Color Temperature (Approx.)	5030 K
Color Temperature Stability <i>(From Calibrated Value)</i>	±25 K
Luminance Stability – Short Term <i>(10 mins.)</i>	±0.2%
Luminance Stability – Long Term <i>(50 hrs.)</i>	±0.5%
Sphere Coating (Reflectance)	>98% <i>(350 to 1100 nm)</i>
Uniformity	±0.1%
CALIBRATION OPTIONS	
OL 458-4-1	Luminance, Color Temperature, Spectral Radiance <i>(380 to 780 nm)</i>
OL 458-4-U	Uncalibrated