

OL 459 Tunable LED Standard

The OL 459 Tunable LED Standard is designed for use as a reference source when calibrating VIS & NIR imaging cameras, photometers, colorimeters, and other optical instruments. The user can define various reference spectral profiles to suit the application requirements of the devices under test.

The OL 459 is packaged in a single, portable enclosure consisting of a 6-inch diameter integrating sphere, auxiliary reference port, keypad / display panel, luminance monitor, internal high-power multi-LED input source and all control electronics.

The keypad / display panel is used to monitor and adjust the driving current and luminance of five separate, temperature-controlled LED channels. Remote control of the source is possible via USB interface and the supporting software, allowing for on/off source control, driving current tuning, and profile management. Internally, the OL 459 can store ten spectral profiles and four calibration factors that can be readily accessed from its keypad & display. Under software control from a Windows PC, there is no limit to the number of custom profiles and calibrations that may be utilized by the OL 459.

The OL 459 includes blue, green, red, deep red, and NIR channels. The OL 459 can be customized in a variety of ways, including sphere size and source wavelength range. Additionally, customer specific chromaticity, luminance, and spectral radiance calibrations can be provided.



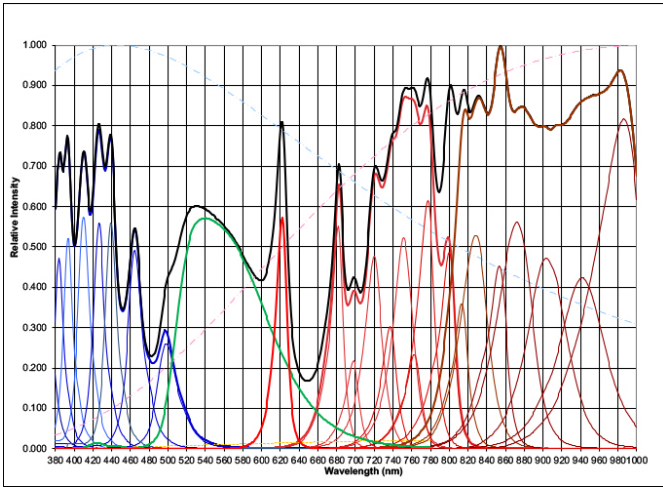
KEY FEATURES

- LED-based Source
- 23 LED Wavelengths Are Provided, Driven By 5 Independently Tunable Channels
- Continuous Spectrum Across the Visible / NIR Wavelength Range
- Compact, Portable Design
- Integrated Monitor Detector
- High Uniformity Output Exit Port
- USB Connection For Remote Control
- Internal Hour Meter Tracks Usage
- Includes Software & SDK package

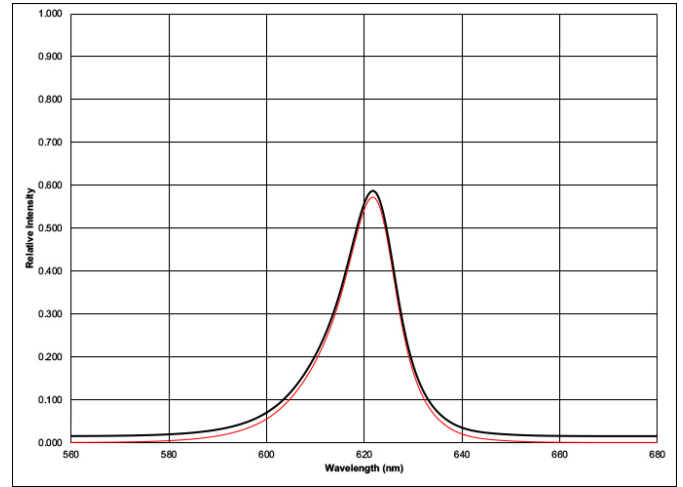
APPLICATIONS

- Camera Calibrations
- Blackbody Color Temperature Replication
- Customizable Spectra For R&D

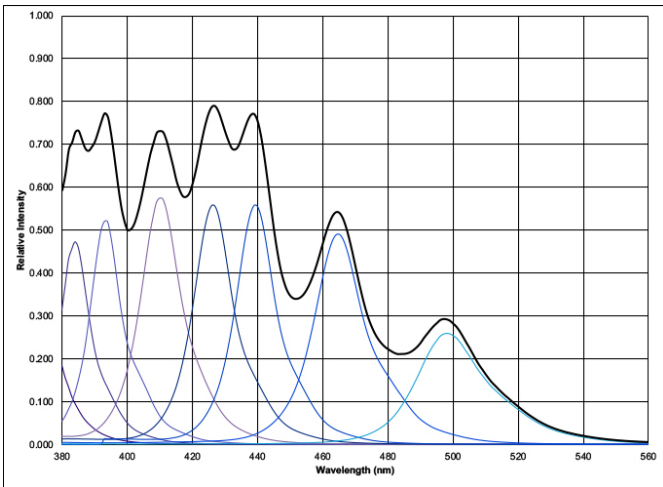
SPECIFICATIONS	
Sphere Size	6.0" (15.2 cm) Diameter
Exit Port Aperture Size	1.50" (38.1 mm) Diameter
Maximum Luminance	25,000 fL (85656 cd/m ²) @ 2856K CCT
Color Coordinate Stability	CIE 1931 x, y ± 0.003
Luminance Stability	±0.5%
Exit Port Uniformity	±1%
Sphere Coating	> 98% Reflectivity
Wavelength Range	380 to 1000 nm (Custom Ranges Available)
Built-in Luminance Monitor	High Accuracy Temperature Stabilized Detector with CIE V _λ Filter
Monitor Detector Linearity E-3 to E-8 Ranges E-9 Ranges E-10 Range	0.05% + 1 Digit 0.10% + 1 Digit 0.50% + 2 Digits
Transition Time Between Spectral Profiles	< 2 Seconds
Operating Temperature / Humidity	41°F to 104°F (5°C to 40°C) / 50% to 80% RH Non-condensing
Source Power Input	48 VDC, 5.8 Amps (via Supplied AC-to-DC Power Supply)
AC Power Input	100-240 VAC, 50/60 Hz, 4.5 Amps
Communication Interface	USB
Auxiliary Reference Port (Optional Spectroradiometer Coupling)	SMA Connection
Dimensions (L x W x H)	12.0" x 7.5" x 10.9" (30.5 cm x 19 cm x 27.7 cm)
Weight	13.5 lbs (6.12 kg)



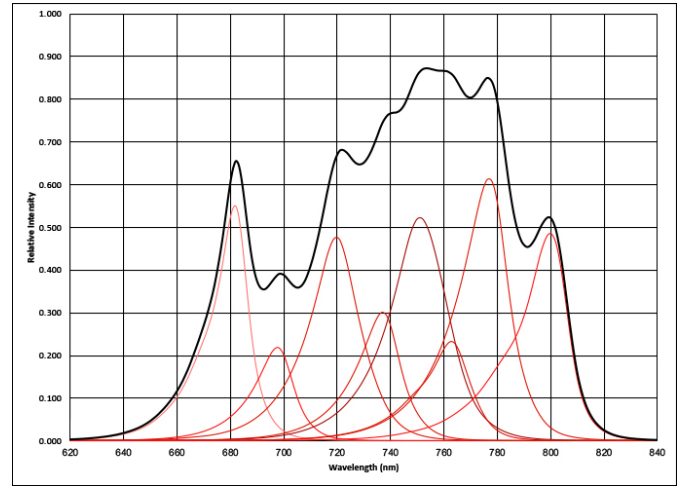
Total



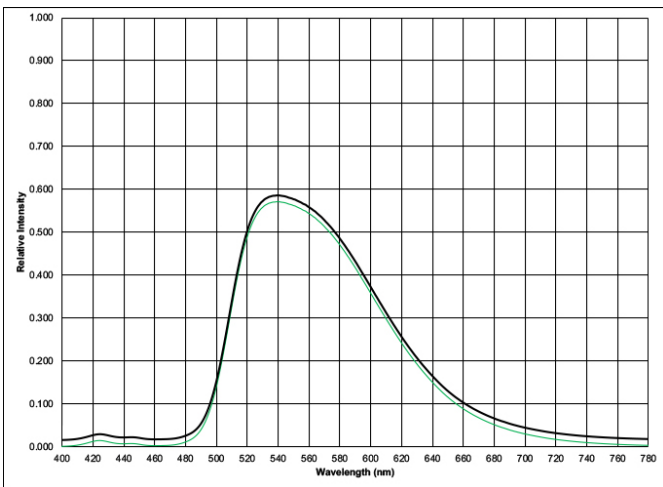
Red 1 Channel



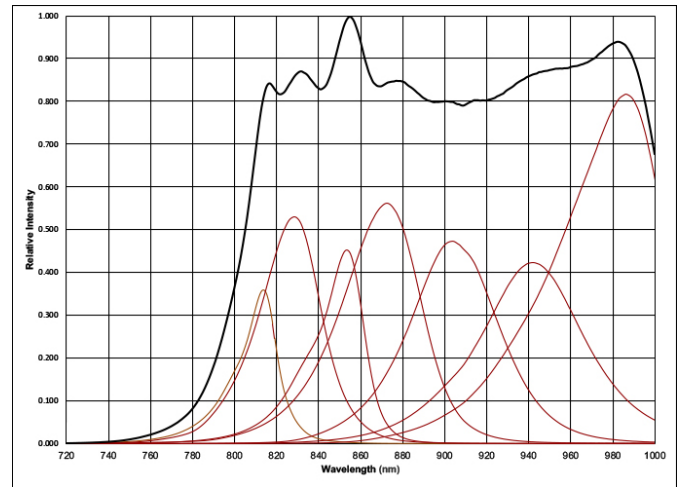
Blue Channel



Red 2 Channel



Green Channel



Near Infrared Channel

OPTRONIC™
LABORATORIES

Data Sheet: B105 July 2020 | Rev B

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