

Solid State Luminance Standards

Enable accurate and reproducible calibration of displays across devices



Accurate

Many mobile devices have LCD displays that are backlit with cool white LEDs. These LEDs have a strong peak in the blue region to excite the phosphor that produces the visible cool white appearance. The spectrometers and colorimeters used to calibrate these displays are typically calibrated with tungsten halogen sources which can result in inconsistent measurement results of the displays due to spectral mismatch errors and stray light in the meters. The best way to correct for these errors is to correct the meter response with a spectrum that matches that of the display backlight. Solid State Luminance Standards are highly stable and accurate cool white solid state integrating sphere luminance and color standards that enables accurate and reproducible calibration of displays across devices.

Compact & robust for production environments

Solid State Luminance Standards are engineered for the demanding high quality and consistent appearance requirements of consumer product displays. The source is engineered to easily mount in a production test station. The reference port window enables validation and correction across the field of view of the test spectrometers with highly uniform luminance and color accuracy. Permaflect®, Labsphere's highly diffuse and durable reflectance coating, and a seasoned LED module ensure long term repeatability and reproducibility in the application environment.

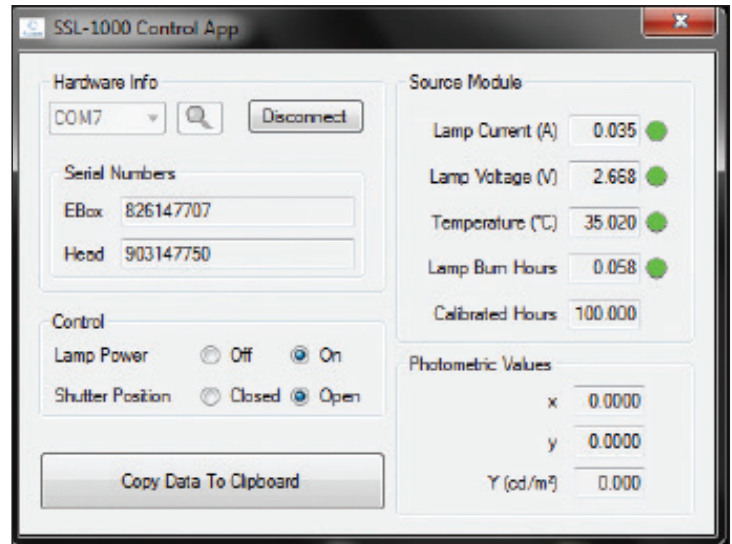
Luminance Uniformity Chart of Typical SSL

Surface Plot



Value

- Correct for spectrometer and colorimeter errors in production testing to ensure reproducible display image quality
- Compact and robust for easy adaptation into existing test environments
- Completely enclosed with raised reference port window to minimize contaminations and promote easy cleaning



Specifications

| | SSL-1000 | SSL-1010 |
|--------------------------------------|---|--|
| Luminance Spatial Uniformity: | >98% inside of 23 mm diameter reference area | >98% inside of 35 mm diameter reference area |
| Luminance: | 500 cd/m ² | 500 cd/m ² |
| Luminance Uncertainty: | +/- 0.9% k=2 | +/- 0.9% k=2 |
| Typical x: | 0.3567 | 0.3567 |
| Chromaticity x Uncertainty: | +/- 0.0009 k=2 | +/- 0.0009 k=2 |
| Typical y: | 0.3658 | 0.3658 |
| Chromaticity y Uncertainty: | +/- 0.0009 k=2 | +/- 0.0009 k=2 |
| Typical CCT: | 4650 K | 4650 K |
| Light Source: | Fully enclosed Integrating Sphere TE Controlled Cool White LED 25.4 mm Luminance Port 3 m Detachable Cable Power Module | Fully enclosed Integrating Sphere TE Controlled Cool White LED 40 mm Luminance Port 3 m Detachable Cable Power Module |
| Calibrated Life: | 100 hrs. | 100 hrs. |
| Stability over 100 hours: | Y: < +/- 0.5% x: +/- 0.0009 y: +/- 0.0009 | Y: < +/- 0.5% x: +/- 0.0009 y: +/- 0.0009 |
| Warm-up Time: | <45 seconds from cold start | <45 seconds from cold start |
| Control Software and User Interface: | x, y, and Y TEC Temperature On/Off LED Current Set and Actual Operation Timer Connection Status Optical Head IDN | x, y, and Y TEC Temperature On/Off LED Current Set and Actual Operation Timer Connection Status Optical Head IDN |
| Operating Temperature: | 20 - 40 degrees C, 0 - 70% RH | 20 - 40 degrees C, 0 - 70% RH |
| Computer Requirements: | Windows 32 bit USB | Windows 32 bit USB |
| Power Input: | 110/240 VAC, 50/60 Hz, 335 W | 110/240 VAC, 50/60 Hz, 335 W |
| Dimensions/Weight: | Height x Width x Depth Weight | Height x Width x Depth Weight |
| | (source module) 13 cm x 11 cm x 26 cm 0.59 kg | (source module) 13 cm x 14 cm x 26 cm 1.5 kg |
| | (power module) 13 cm x 23 cm x 37 cm 6.8 kg | (power module) 13 cm x 23 cm x 37 cm 6.8 kg |

Order Information

| Model Number | Order Number | Description |
|---------------------|---------------------|---------------------------------|
| SSL-1000 | AA-01269-000 | 25.5 mm diameter reference port |
| SSL-1010 | AA-01270-000 | 40 mm diameter reference port |

Accessories Include:

Uniform Source and Control Module
Control Commands and UI
Calibration Reports
Transport Case