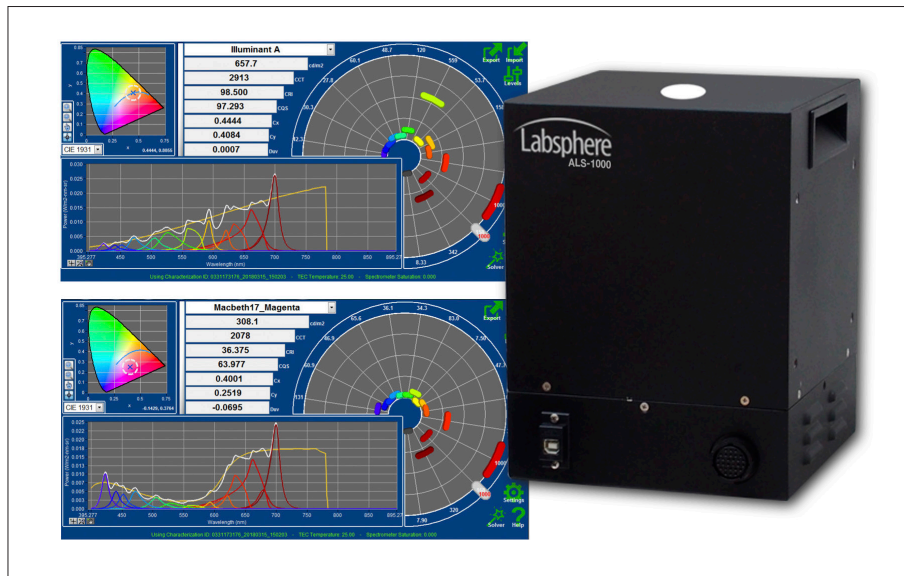# Tunable Ambient Light Sensor Calibration Sources

Highly uniform illumination

The 2.54 cm diameter port enables test and calibration with highly uniform illumination.

Trusted test data

Labsphere is a recognized leader in image sensor calibration sources. Our Tunable Image Sensor Characterization Sources are engineered for the high performance requirements in image sensor production testing and calibration.

Save money, save space

One instrument produces multiple spectrums. Large area uniform luminance field in a compact and robust instrument. The sources are designed to easily mount in a production test station with active spectral feedback loop and user recalibration features.

Repeatable, reproducible results

With Labsphere's diffuse reflectance material, Spectralon®, and thermal-controlled LED module, long term repeatability and reproducibility are ensured.

Specifications

Light Source: Integrating Sphere
                                                 Tunable LED Light Engine and Discrete Color Channels
                                                 Current Regulated DC Driver Control
                                                 Spectral Range:
                                                     CCS-1000-ALS: Visible, 850 nm and 940 nm, no spectrometer
                                                     CCS-1100-ALS: Visible, 850 nm and calibration lamp, with spectrometer

Typical Spectral Output CIE 1931 Illuminants & more:

CCS-1000	CRI (Typical)	Duv Tolerance
Illuminant A	98	± 0.001
Illuminant B	98	± 0.002
Illuminant C	98	± 0.002
Illuminant D50	98	± 0.002
Illuminant D55	98	± 0.002
Illuminant D65	98	± 0.002
Illuminant D75	98	± 0.002
Illuminant F2	64	± 0.002
Illuminant F12	81	± 0.003
Neutral E	96	± 0.002
SSL-WW	81	± 0.003
840 nm		
950 nm		

Luminance Spatial Uniformity: >97%

Output Port: 25 mm diameter

Iluminance Range: 150 to 3000 lux

Long Term Stability: +/- 1%

Short Term Stability: +/- 0.1% COV after 500 msec

Initial Warm-Up Time: 500 msec between spectra

Control: Software Development Kit   Individual Light Channel Control
        and LabVIEW User Software   Preset Functions for Illuminant Spectrums
                                                 Illuminance, x, y, CCT, CRI, Duv
                                                 Stability Indicator
                                                 Active Spectral Feedback Loop
                                                 Embedded User Recalibration Process

        With Spectrometer Monitor Option   Spectral Irradiance (μW/cm^2-sr-μm)
                                                 Illuminance (lux)
                                                 Luminance (cd/m^2) (optional)
                                                 CRI
                                                 Duv

Operating Temperature: 20 - 40 degrees C, 0 - 70% RH

Computer Requirements: Windows®, 32 bit
                                                 RS-232 DB9 or USB

Power Input: 110/220 VAC, 50/60 Hz

Dimensions: Integrating Sphere Source Module   18 cm x 18 cm x 24 cm (L x W x H)
            Power Module   37 cm x 23 cm x 13 cm (L x W x H)

Weight: Integrating Sphere Source Module   8 kg
        Power Module   6 kg

Ordering Information

Order Number	Model Number	Description
AA-01367-400	CCS-1000-ALS	Tunable LED Source Without Spectrometer Includes visible, 850 nm and 940 nm LEDs
AA-01367-500	CCS-1100-ALS	Tunable LED Source With Spectrometer Includes visible, 850 nm LED and calibration lamp

Labsphere
advancing the technology of light

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