GONIOMETRIC SPECTRORADIOMETER LCS-100-G

For Far Field Angular Characterization of a single LED

LCS-100 G GONIOMETRIC SPECTRORADIOMETER

ACCURATE

The LCS-100-G Goniometric Spectroradiometer enables complete far-field angular characterization of a single LED (standard and high power). Users can perform accurate, repeatable angular characterizations for intensity, spectrum, and derived color values. A front panel rotational dial allows for manual axial rotation of the LED in 15° increments. A small cosine-corrected detector placed at 100 mm sweeps up to 180° at a user selectable resolution as small as 1.8 degrees. Scan time for measurements range from one minute for low resolution LEDs up to 10 minutes for high-brightness LEDs, in order to complete a full angular scan, including brightness, scan averaging and angular range of the LED under test. The system includes a NIST traceable calibration source and dedicated power supply for spectral intensity calibrations.

FEATURES:

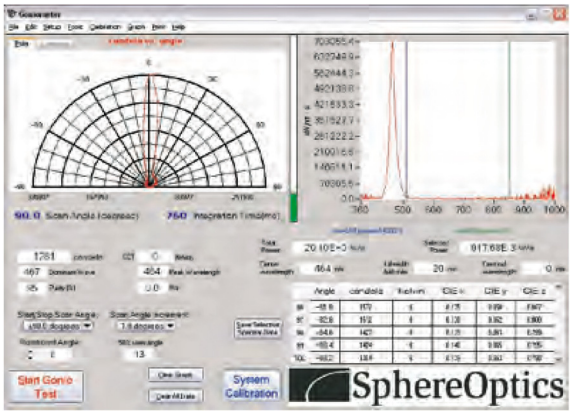
- High Sensivity Spectrometer
- 1.5 nm Spectral Resolution
- ±90 Scans Horizontal
- Variable Resolution 1.8° - 9°
- 0-180° Axial Rotation in 15° Increments
- 0.5 nm Wavelength Accuracy
- NIST Traceable Calibration Lamp
- Built-In Self Calibration Function
- USB 2.0 Computer Connection

MEASURE:

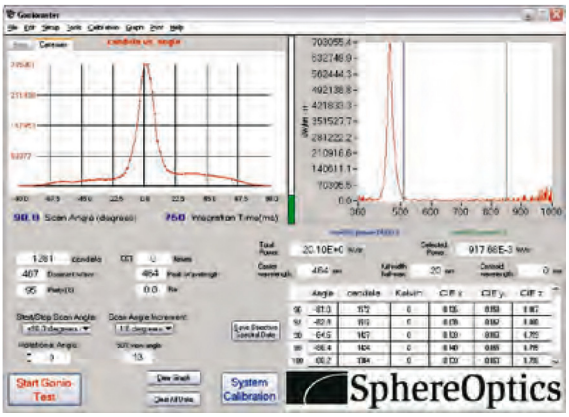
- Candela vs Angle
- W/sr-nm vs Angle
- Viewing Angle
- Peak Intensity
- Chromaticity vs Angle (x, y, u' v')
- Dominant Wavelength vs Angle
- Peak Wavelength vs Angle
- Center Wavelength vs Angle
- Centroid Wavelength vs Angle
- Color Temperature vs Angle
- CRI vs Angle
- Purity vs Angle
- FWHM vs Angle

ROBUST SOFTWARE

The Windows® XP software provides real-time graphics capabilities in an easy, fast environment for accurate measurements. The computer display can be toggled between Cartesian and Polar plots as well as between luminous intensity (candela) and spectral radiant intensity. Data is quickly and easily exported to .csv files that are readable in Excel. The software is compatible with all LCS LED measurement products offered by Labsphere.



LCS-100 G SOFTWARE POLAR PLOT VIEW



LCS-100 G SOFTWARE CARTESIAN VIEW

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PB-13013-000

Specifications

Model Name	Part Number	Description
LCS-100-G		LCS Goniometer (Intensity vs. Angle) Module for use with the LCS-100 (360 - 100 nm)

System Properties and Performance

Measurement Range

LED Type	Candela	W/sr
Warm White (3180 K)	5e-5 to 250	7e-6 to 1.00
Cool White (6150 K)	5e-5 to 250	7e-6 to 1.00
Blue (456 nm)	5e-5 to 20	5e-7 to 0.50
Green (530 nm)	5e-5 to 100	3e-7 to 0.15
Amber (590 nm)	5e-5 to 40	3e-7 to 0.10
Red Orange (625 nm)	5e-5 to 30	3e-7 to 0.15
Red (670 nm)	5e-5 to 5	3e-7 to 0.15
IR (815 nm)	N/A	1e-6 to 0.75

CCD Spectrograph Specifications

Detector:	2048 element CCD array
Spectral Range Sensitivity:	360 - 1000 nm
Calibration Range:	360 - 1000 nm
Spectral Resolution:	1.5 nm
Wavelength Accuracy:	0.5 nm
Sample Spectral Interval:	1.0 nm
Exposure Time:	1 ms to 2000 ms
Interface:	USB 2.0
Computer Requirements:	Processor: Pentium 300 MHz or greater; 32 MB RAM Minimum Hard Drive 4 MB, Windows XP, USB 2.0 Interface Power Requirements: 120/230 V ~ 50/60 Hz

Physical Dimensions

Dimensions:	14 in. W x 12 in. D x 6 in. H (35.5 cm W x 30 cm D x 15 cm H)
Weight:	6 lbs — 2.72 kg

Calibration Lamp

Model Number:	LCS-100-G-10W
Calibration:	360 to 1000 nm
Power:	10 Watts
Luminous Intensity:	~ 10 Candela
Calibration Life:	50 hours (1000 calibrations)

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