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Find the *Labsphere CDS-610* at our website: *Click HERE*

MEASURE
any light source

CDS Mini
CCD Array Spectrometers

Comprehensive spectral measurements in fractions of a second



Accurate

The highly sensitive CDS 600 and CDS 610 Mini CCD Array Spectrometers offer low noise and a broad spectral response with calibrated ranges from 200 to 850 nm or 350 to 1000 nm. When coupled with a Labsphere integrating sphere, the spectrometers avoid the inherent photometric errors associated with filter-based photometers; data is accurate even for narrow-band light sources such as LEDs, fluorescent lamps, and discharge lamps. In production, these systems can increase the throughput of quality assurance testing which facilitates improved statistical process control for higher manufacturing consistency and greater product quality.

Fast

The Labsphere CDS Mini CCD Array Spectrometers are a multi-channel spectral analyzer designed for real-time spectral analysis. The instantaneous spectral acquisition provides the radiometric, photometric, and color characteristics of the device under test (DUT). The fast results help to increase the rate of product development, decrease the time to market, and reduce development costs.

Easy to use

The CDS spectrometers easily connect to a PC via an USB-2 port and use a fiber optic cable to connect to the optical head, enabling the remote positioning of the spectrometer. The Windows® XP-based software guides the user through testing procedures making complex spectral measurements simple while still meeting the needs of experienced researchers.

Value

- Wide spectral range
- Comprehensive light measurement software
- 2 nm spectral resolution
- Wavelength accuracy <0.5 nm
- Fast CCD array detector
- 3 m fiber optic input cable

Measure

- Packaged LEDs
- Clustered LEDs
- Miniature lamps
- Entertainment lighting
- Automotive lighting

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Ordering Information

Model Number	Order Number
CDS 600 CCD Array Spectrometer	AS-02767-000
CDS 610 CCD Array Spectrometer	AS-02767-100

System Includes

- Labsphere's CDS CCD Array Spectrometer
- 3 meter fiber optic input
- 2 meter USB-2 cable

Required, Sold Separately

- MtrX-SPEC Spectral Light Measurement Software,

The CDS CCD Array Spectrometers are designed for use with Labsphere's LED, flashlight, and light measurement spheres and optical heads. To calibrate for light measurement, reference standards of total spectral flux are available for system calibration. For a comprehensive spectral light measurement solution, reference Labsphere's complete line of Spectral Light Measurement Systems.

Specifications

Model Number	CDS 600	CDS 610
Spectroscopic		
Wavelength Range:	200 - 850 nm	350 - 1000 nm
Signal-to-Noise Ratio:	250:1 (at full signal)	250:1 (at full signal)
A/D Resolution:	16 bit	16 bit
Dark Noise: (correctable)	50 RMS counts	50 RMS counts
Dynamic Range:	2 x 10^8 (system); 1300:1 for a single acquisition	2 x 10^8 (system); 1300:1 for a single acquisition
Integration Time:	1 ms to 5 seconds	1 ms to 5 seconds
Stray Light:	<0.05% at 600 nm; <0.10% at 435 nm	<0.05% at 600 nm; <0.10% at 435 nm
Corrected Linearity:	>99.8%	>99.8%
Electronics		
Power Consumption:	90 mA @ 5 VDC	90 mA @ 5 VDC
Connector:	10-pin connector	10-pin connector
Computer Operating Systems:	Windows XP with USB port	Windows XP with USB port
Computer Interfaces:	USB 2.0 @ 480 Mbps	USB 2.0 @ 480 Mbps
Physical		
Dimensions:	89.1 mm x 63.3 mm x 34.4 mm	89.1 mm x 63.3 mm x 34.4 mm
Weight:	190 grams	190 grams
Detector		
Detector:	Sony ILX511 linear silicon CCD array	Sony ILX511 linear silicon CCD array
Detector Range:	200 - 1100 nm	350 - 1050 nm
Pixels:	2048 pixels	2048 pixels
Pixel Size:	14 µm x 200 µm	14 µm x 200 µm
Pixel Well Depth:	~62,500 electrons	~62,500 electrons
Sensitivity:	75 photons/count at 400 nm; 41 photons/count at 600 nm	75 photons/count at 400 nm; 41 photons/count at 600 nm
Optical Bench		
Design:	f/4, Symmetrical crossed Czerny-Turner	f/4, Symmetrical crossed Czerny-Turner
Focal Length:	42 mm input; 68 mm output	42 mm input; 68 mm output
Entrance Aperture:	100 µm	100 µm
Fiber Optic Connector:	SMA 905 to 0.22 numerical aperture single-strand optical fiber	SMA 905 to 0.22 numerical aperture single-strand optical fiber

Compatible With:

LMS Light Measurement Spheres
I 1000 Spectral Intensity Head
I 2000 Spectral Intensity Head
E 1000 Spectral Irradiance Receiver

Labsphere
Advancing the Technology of Light: Measure. Create. Reflect.

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