Real Time Spectral Reproduction Accessory

Accurate
The UT-CDS-600-EX is an external accessory to the Spectra-UT, UT-1000 ultra-tunable sources. The UT-CDS-600-EX uses the CDS-600 to measure light from a source or reflected light off a surface. The measured spectrum is fed into the UT-1000 where the UT-1000 reproduces the measured spectrum in a highly uniform spectral radiance. It is as easy as making a spectral radiance measurement of a sample, hit send and the UT-1000 reproduce the spectrum through its uniform radiance port.

Easy to use
The UT-CDS-600-EX spectrometer easily connects to a PC via an USB-2 port. A fiber optic cable connects to the radiance head, enabling the remote positioning of the spectrometer and data collection application calibration and measurement. The software guides the user through making data acquisition simple while still meeting the needs of experienced researchers.

Value
• Reproduce display spectrum for color correction
• Reproduce natural objects under different illuminations for image analysis
• Save time creating visible spectral targets for the UT-1000
• User calibration feature using UT-1000 spectral radiance

Labsphere’s UT-CDS-600-EX next to the UT-1000 Ultra-Tunable Source
### Ordering Information

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### Accessory Includes
- CDS 600 spectrometer with 3m fiber optics cable and 2m USB 2 cable
- Radiance Head
- Radiance Head Calibration Adaptor
- UT-CDS-600-EX-LS Software

### Specifications

- **Wavelength Range:** 200 - 850 nm
- **Signal-to-Noise Ratio:** 250:1 (at full signal)
- **A/D Resolution:** 16 bit
- **Dark Noise:** 50 RMS counts (correctable)
- **Dynamic Range:** $2 \times 10^8$ (system); 1300:1 for a single acquisition
- **Integration Time:** 1 ms to 5 seconds
- **Stray Light:** <0.05% at 600 nm; <0.10% at 435 nm
- **Corrected Linearity:** >99.8%

#### Detector
- **Detector:** Sony ILX511 linear silicon CCD array
- **Detector Range:** 200 - 1100 nm
- **Pixels:** 2048 pixels
- **Pixel Size:** 14 μm x 200 μm
- **Pixel Well Depth:** ~62,500 electrons
- **Sensitivity:** 75 photons/count at 400 nm; 41 photons/count at 600 nm

#### Optical Bench
- **Design:** f/4, Symmetrical crossed Czerny-Turner
- **Focal Length:** 42 mm input; 68 mm output
- **Entrance Aperture:** 100 μm
- **Fiber Optic Connector:** SMA 905 to 0.22 numerical aperture single-strand optical fiber

#### Electronics
- **Power Consumption:** 90 mA @ 5 VDC
- **Connector:** 10-pin connector
- **Computer Operating Systems:** Windows XP with USB port
- **Computer Interfaces:** USB 2.0 @ 480 Mbps

#### Physical
- **Spectrometer Dimensions:** 89.1 mm x 63.3 mm x 34.4 mm
- **Spectrometer Weight:** 190 grams

*Visible range used only for UT-1000 applications*