



CalibraSpec 4500A

Ultimate Stability in Radiometric Calibration Transfer

The Spectral Evolution CalibraSpec 4500A spectroradiometer delivers the ultimate performance in spectral measurements stability for a wide variety of applications.

Using all thermoelectrically-cooled photodiode arrays, the CalibraSpec 4500A is engineered specifically for the performance demands of calibration transfer applications.

The CalibraSpec 4500A features:

- Drift stability of 0.1% for greater accuracy of long-term stability measurements of integrating spheres and light sources
- A temperature controller maintains the instrument housing at a stable temperature to minimize warm-up time.
- All detector temperatures are integrated into DARWin™ SP Data Acquisition software readout for monitoring
- Automatic integration of all detectors and dark current correction for unparalleled signal-to-noise ratio
- High-transmission fiber optic cable radiometrically to NIST standard.
- Optional radiometrically calibrated optics such as lenses and cosine receptors

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Radiometric Calibration Transfer

CalibraSpec 4500A Technical Specifications:

- **Spectral Range:** 350-2500nm
- **Photodiode Arrays:**
 - 512 element TE cooled Si (350-1000nm)
 - 256 element TE cooled extended InGaAs (1000-1900nm)
 - 256 element TE cooled extended InGaAs (1900-2500nm)
- **All dispersive optics fixed in place – no moving parts**
- **Auto dark current shutter & auto-exposure control**
- **Fixed metal clad fiber optic cable with SMA-905 input** (fiber is user removable with 4 bolts)
- **Wireless Connection and USB interfaces**
- **Comes complete with DARWin SP Data Acquisition Software** (Windows compatible)
- **Minimum Scan Speed:** 100milliseconds
- **Spectral Resolution (FWHM):**
 - 3nm @ 350-1000nm
 - 8nm @ 1500nm
 - 6nm @ 2100nm
- **Sampling Bandwidth:**
 - 1.5nm @ 350-1000nm
 - 3.8nm @ 1500nm
 - 2.5nm @ 2100nm
- **Noise Equivalence Radiance (with 1.2 meter fiber optic):**
 - 0.2×10^{-9} W/cm²/nm/sr @ 400nm
 - 0.2×10^{-9} W/cm²/nm/sr @ 700nm
 - 0.9×10^{-9} W/cm²/nm/sr @ 900nm
 - 1.2×10^{-9} W/cm²/nm/sr @ 1500nm
 - 1.8×10^{-9} W/cm²/nm/sr @ 2100nm
- **Max Radiance @ 700nm (1.2m fiber optic):** 3.0×10^{-4} W/cm²/nm/sr
- **Stability Specification:** 0.1% drift stability



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