

MEASUREMENT AND CALIBRATION SERVICES

Optronic Laboratories was established as an optical radiation instrumentation, standards and calibration laboratory in 1970. Forming the nucleus of the company were two former NIST (*National Institute of Standards and Technology, formerly the National Bureau of Standards*) physicists who had individually made significant contributions to the field of spectroradiometry and electro-optical technology. The company was established to eliminate a void that existed in industry, government, and academia in the area of optical radiation standards, calibration services, and measurement instrumentation. As the result of a constant emphasis on precision and accuracy in these endeavors, the company has earned a worldwide reputation for high quality instrumentation and unique solutions to the most difficult and complex light measurement challenges.

Though initially patterned after the procedures of NIST laboratories, Optronic Laboratories has evolved its practices more toward handling practical calibration problems. As a result, the company provides unique calibration services that include, but are not limited to, providing spectroradiometric, radiometric and photometric standards.

Most of the standards and calibration services supplied by Optronic Laboratories are directly traceable to NIST. In those cases where NIST standards are not available, standards from other national laboratories or standards set up at Optronic Laboratories are used. Optronic Laboratories maintains the following primary shelf standards:

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| • Spectral Irradiance Standards | • Total Irradiance Standards |
| • Ultraviolet Irradiance Standards | • Spectral Radiance Standards |
| • High Intensity Irradiance Standards | |
| • Diffuse Spectral Reflectance Standards | • Specular Spectral Reflectance Standards |
| • Silicon Detector Standards | • Pyroelectric Detector Standards |
| • Germanium Detector Standards | |
| • Luminous Intensity Standards | • Radiance Temperature Standards |
| • Color Temperature Standards | |

CALIBRATION SERVICES OFFERED BY OPTRONIC LABS

Spectroradiometric

- Spectral Irradiance (W/cm^2nm)
- Spectral Radiance ($W/ster\ cm^2\ nm$)
- Spectral Exitance or Emittance ($W/cm^2\ nm$)
- Spectral Radiant Power (W/nm)
- Spectral Radiant Energy (J/nm)
- Spectral Radiant Energy Density ($J/cm^2\ nm$)

Radiometric

- Radiant Power (W)
- Irradiance (W/cm^2)
- Radiance ($W/ster\ cm^2$)
- Radiant Energy (J)
- Radiance Temperature (K)

Photometric

- Illuminance
- Total Luminous Flux
- Luminance
- Color Temperature
- Luminous Intensity
- Chromaticity

CHARACTERIZATION OF DETECTORS, RADIOMETERS, ARRAYS & CCDS

Absolute Spectral Responsivity

- Spectral Power Response ($A\ or\ V\ per\ W$)
- Spectral Irradiance Response ($A\ or\ V\ per\ W/cm^2$)
- Spectral Radiance Response ($A\ or\ V\ per\ W/ster\ cm^2$)

Total Irradiance Response ($A\ or\ V\ per\ W/cm^2$)

Total Power Response ($A\ or\ V\ per\ W$)

Illuminance Response ($A\ or\ V\ per\ footcandle$)

Luminous Flux Response ($A\ or\ V\ per\ lumen$)

Luminance Response ($A\ or\ V\ per\ footlambert$)

CALIBRATION OF SPECTRORADIOMETERS

Spectral Irradiance Response

Spectral Radiance Response

OPTICAL PROPERTIES OF MATERIALS

Spectral Transmittance (Regular & Diffuse)

Diffuse Spectral Reflectance

Specular Spectral Reflectance (Variable Angle of Incidence)

Dr. Richard Young holds a Ph.D. in Chemistry and has been the vice president of the Council for Optical Radiation Measurement (CORM) since 2001. He has also been recognized for his professional participation in and contributions to the Aerospace Lighting Institute (ALI), the International Commission on Illumination (CIE), the Illuminating Engineering Society of North America (IESNA), and the International Society for Optical Engineering (SPIE).

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As part of our policy of continuous product improvement, we reserve the right to change specifications at any time.