

Spectroradiometer  
**specbos 1201**

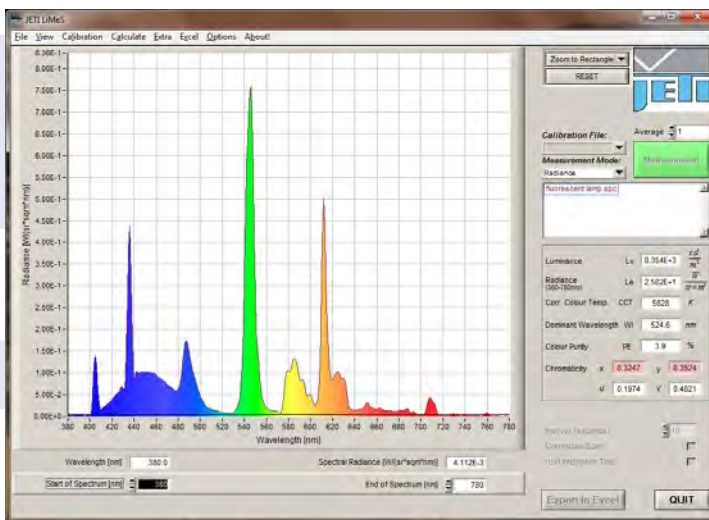
**specbos 1201** is a precise and compact VIS-spectroradiometer.

It can be used in laboratory as well as in production environment to measure the following quantities:

- Luminance, Radiance
- Illuminance, Irradiance
- Xy and u'v' coordinates
- Dominant wavelength, spectral bandwidth (FWHM)
- Correlated Color Temperature
- Color Rendering Index



Luminous Intensity and Luminous Flux measuring heads are available optionally.



Screen shot of the radiometric software

The instrument can be operated with the intuitive measuring software (for a demo version see [www.opteema.com](http://www.opteema.com)).

Furthermore, it is possible to implement the instrument into individual applications using the virtual COM port directly by the following ways:

- Radiometric DLL
- Radiometric Virtual Instruments for LabView
- Serial commands

**Advantages:**

- USB powered
- Internal target spot laser (luminance measurements)
- Easy to install
- Start of measurement with external trigger signal

**Applications:**

- LED-Applications
- TV, Monitors, LCD-, LED-Displays
- Digital projectors
- Traffic lights, automotive lights
- Illumination
- Lamps and luminaries

## Specification

<b>Optical parameters</b>	
Spectral range	380 nm ... 780 nm
Wavelength resolution	5 nm
Calculated wavelength step	1 nm
Digital electronic resolution	15 bit ADC
Viewing angle	1,8°
Measuring distance/ diameter	20 cm - Ø 6 mm; 100 cm - Ø 31 mm (luminance)
<b>Measuring values</b>	
	Spectral radiance
	Total luminance / total radiance
	Total illuminance / total irradiance
	Chromaticity coordinates x,y; u',v'
	Correlated Color Temperature
	Dominant wavelength, color purity
	Peak wavelength, FWHM
	Color Rendering Index
<b>Measuring ranges and accuracies</b>	
Measuring range luminance	2 ... 7 x 10 <sup>4</sup> cd/m <sup>2</sup> (higher values with optional filter)
Measuring range illuminance	20 ... 5 x 10 <sup>5</sup> lx
Luminance accuracy	± 2 % (@ 1000cd/ m <sup>2</sup> and 2856 K)
Luminance reproducibility	± 1 %
Chromaticity accuracy	± 0.002 x, y (@ 2856 K)
Color reproducibility	± 0.0005 x, y
CCT reproducibility	± 20 K (@ 2856 K)
Wavelength accuracy	± 0.7 nm
<b>Other technical data</b>	
Dispersive element	Imaging grating (flat field)
Light receiving element	Photodiode array 1024 pixel
Power supply	USB powered
Interface	USB 2.0 fullspeed
Dimensions	140 mm x 58 mm x 34 mm
Weight	350 g
Operating conditions	Temperature 10 ... 40 °C Humidity < 85 % relative humidity at 35 °C
Accessories (included)	PC software JETI radiometric for Windows 2000/XP DLL, LabVIEW VI's USB cable and trigger connector Tripod Diffusor (for illumination measurement) Calibration certificate Operation instructions Transport box
Calibration	NIST traceable
Recommended recalibration interval	1 year

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