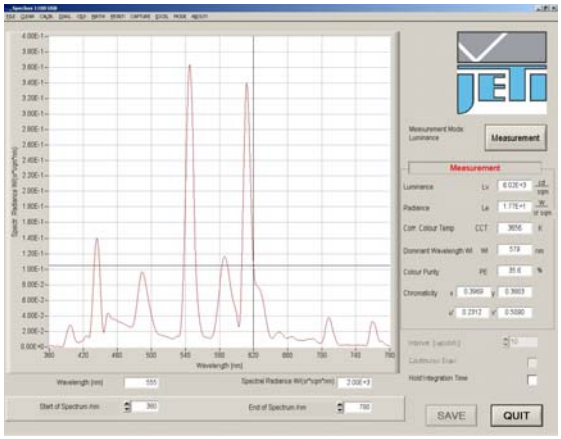
Spectroradiometer

Specbos 1201

The **Specbos 1201** is a precise and compact VIS spectroradiometer. It can be used in laboratory as well as production environments to measure the following quantities:

- Luminance, Radiance
- Illuminance, Irradiance
- xy and u´v´ coordinates
- Dominate wavelength, Color purity
- Peak wavelength, Spectral bandwidth (FWHM)
- Correlated Color Temperature
- Color Rendering Index

Luminous Intensity and Luminous Flux measuring heads are optional.



Screenshot of the radiometric software

The instrument is operated using JETI's intuitive measuring software. (For a demo copy see www.jeti.com.) Furthermore it is possible to incorporate the instrument into individual applications using the virtual COM port directly by the following methods:

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

Advantages:

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

Applications:

- TVs, monitors, LCD or LED displays,
- Digital projectors
- Traffic lights, car lights,
- Illumination
- Lamps

Specification

Optical parameters	
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 - ∅ 6 mm; 100 cm - ∅ 31 mm (luminance)
Measuring values	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
Measuring ranges and accuracies	
Measuring range luminance	2 ... 7 x·10^4 cd/m^2 (higher values with optional filter)
Measuring range illuminance	20 ...5 x 10^5 lx
Luminance accuracy	± 2 % (@ 1000 cd/m^2 and 2,856 °K)
Luminance reproducibility	± 1 %
Chromaticity accuracy	± 0.002 x, y (@ 2,856 °K)
Color reproducibility	± 0.0005 x, y
CCT reproducibility	± 20 °K (@ 2,856 °K)
Wavelength accuracy	± 0.7 nm
Other technical data	
Dispersive element	Imaging grating (flat field)
Light receiving element	Photodiode array, 1024-pixel
Power supply	USB powered
Interface	USB 2.0 full speed
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)	JETI Radiometric software for Windows 2000/XP DLL, LabVIEW Virtual Instruments USB cable and trigger connector Tripod Diffusor (for illumination measurement) Calibration certificate Operating instructions Transport box
Calibration	NIST traceable
Recommended recalibration interval	1 year

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