



Broadbandradiometer specbos 1211

specbos 1211 is a broadband and fast spectroradiometer which can be used in laboratory as well as production environment to measure the following quantities:

- Luminance, radiance
- Illuminance, irradiance
- xy and u'v' coordinates, RGB values
- Dominate wavelength, color purity
- Correlated Color Temperature
- Color Rendering Index

Highlights:

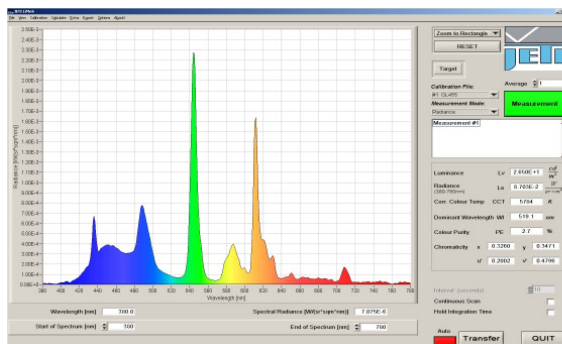
- Wavelength range from VIS to NIR
- High sensitivity
- Radiance as well as irradiance measuring modes
- Small and easy to use
- NIST traceable calibration
- Measurement also possible with DLLs or SCPI compatible commands



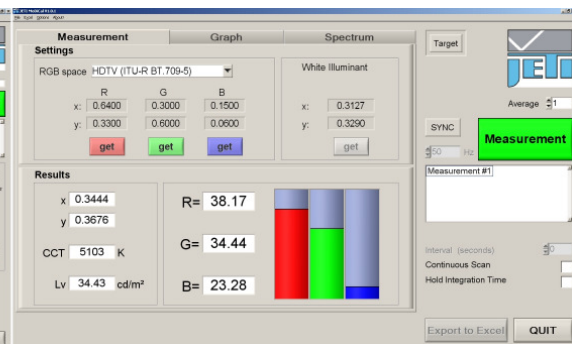
Examples for applications are the following:

- Calibration of broadcast monitors
- Color adjustment of digital projectors
- Measurement of weighted spectra, e.g. to characterize hazardous radiation
- Measurement of fluorescence and UV lamps
- Spectral measurements in goniometers
- Measurement of extended luminaires like OLEDs

The instrument can be operated with the intuitive measuring software LiMeS (for a demo version see www.jeti.com) or with one of the application specific programs.



Screenshot of general radiometric software



Screenshot of monitor calibration software

Specification

Optical parameters

Spectral range	
specbos 1211	350 ... 1000 nm
Optical bandwidth	4.5 nm
Wavelengths resolution	1 nm
Digital electronic resolution	15 bit ADC
Viewing angle	1,8° (luminance mode)
Measuring distance/ diameter	20 cm - Ø 6 mm; 100 cm - Ø 31 mm (luminance mode)

Measuring values

Spectral radiance/ Spectral irradiance
Total luminance / total radiance
Total illuminance / total irradiance
Chromaticity coordinates x,y; u',v'
Correlated Color Temperature, color purity
Color Rendering Index, RGB
Circadian metrics, photosynthetically active radiation

Measuring ranges and accuracies

Measuring range luminance	0.1 ... 2500 cd/m ² (higher values with optional filter)
Measuring range illuminance	2 ... 20 000 lx
Luminance accuracy	± 2 % (@ 1 000 cd/m ² and 2856 K)
Luminance repeatability	± 1 %
Chromaticity accuracy	± 0.002 x, y (@ 2856 K)
Color repeatability	± 0.0005 x, y
CCT repeatability	± 20 K (@ 2856 K)
Wavelength accuracy	± 0.5 nm

Other technical data

Dispersive element	Imaging grating (flat field)
Light receiving element	Backthinned CCD array 2048 pixels (binned)
Power supply	USB Hub powered
Interface	USB 2.0 fullspeed
Dimensions	180 mm x 82 mm x 53 mm
Weight	450 g
Operating conditions	Temperature 10 ... 40 °C Humidity < 85 % relative humidity at 35 °C
Accessories (included)	PC software JETI LiMeS for Windows 7/ XP/ Vista DLL, LabVIEW VI's USB cable and trigger connector Cosine diffusor (for irradiance measurement) Calibration certificate, operation instructions Tripod, transport box
Accessories (optional)	Integrating spheres of different diameters (Lum. flux measurement) Netbook with installed software (for mobile applications)
Calibration	NIST traceable
Recommended interval	1 year

Additional features:

- Pass/ fail decisions
- Ranking function (up to 16 ranks)
- Saving of reference spectra
- Spectral calculations
- Data export in csv and xls files
- Switching between Si and Imperial units

Advantages:

- USB powered
- Very fast measurement
- Internal target spot laser (luminance measurement)
- mechanical shutter for dark signal compensation
- Easy to install
- Start of measurement with external trigger signal

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