

specbos 1211-2 | specbos 1211-UV-2

Broadband Spectroradiometer

specbos 1211-2 and specbos 1211-UV-2 are broadband miniaturized and fast spectroradiometers that can be used in laboratories as well as in 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:
 - specbos 1211-2 VIS to NIR
 - specbos 1211-UV-2 UV 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

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

Examples for applications are the following: specbos 1211-2

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

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



specbos 1211-UV-2

- Radiation measurement of UV curing devices
- Measurement of UV disinfection apparatus
- Determination of the optical hazard from non coherent radiation sources
- Measurement of UV LEDs and other UV sources
- Extended metameric measurements (M_u)
- Measurement of fluorescence tubes

*For measurements of spectral Irradiance/Illuminance an optional diffusor is required (available at jeti.com).

Specifications

Optical parameters

Spectral range	350 ... 1000 nm
specbos 1211-2	350 ... 1000 nm
specbos 1211-UV-2	230 ... 1000 nm
Optical bandwidth	< 4.5 nm (FWHM)
Wavelength resolution	1 nm
Digital electronic resolution	15 bit ADC
Viewing angle	1.8° (Luminance mode)
Measuring distance/ diameter	20 cm – Ø 7 mm; 100 cm – Ø 33 mm
(measured from front end of the device)	

Measuring values

	Spectral Radiance, Luminance, total Radiance, x,y, u',v', CCT, CRI, color purity, RGB, PAR, TLCl, circadian metrics and others
With optional diffusor	Spectral Irradiance/ total Irradiance/ Illuminance

Measuring ranges and typical measuring uncertainties (according to CIE TN 009:2019)

Luminance measuring range	0.2 ... 150 000 cd/m ² (Illuminant A) 0.2 ... 100 000 cd/m ² (typical warm white LED) (higher values with optional filter)
Luminance accuracy	± 4.4 % (Illuminant A @ 100 cd/m ² , k=2)
Luminance reproducibility	± 1 %
Chromaticity accuracy	± 0.002 x, y (Illuminant A, k=2)
Color reproducibility	± 0.0005 x, y (Illuminant A)
Illuminance measuring range	1 ... 1 800 000 lx (Illuminant A) 1 ... 1 500 000 lx (typical warm white LED)
Illuminance accuracy	± 2.4 % (Illuminant A @ 2000 lx, k=2)
CCT reproducibility	± 20 K (Illuminant A)
Max. wavelength error	± 0.5 nm (HgAr line source)
Polarization error f8	< 1 %

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, Bluetooth (specbos 1211-BT-2) RS232 (specbos 1211-2-RS), LAN (specbos 1211-LAN-2)
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 LiVal for Windows 10/ 11, operating instructions and software development kit on USB flash drive, USB cable, battery charger, tripod, carrying case, protection cap, calibration certificate
Accessories (optional)	Filters, side view and fiber extended diffusors, add-on optics
Calibration	NIST traceable
Recommended interval	1 year