JETI Technische Instrumente

Spectrometric Solutions from Components to Systems

specbos 1211UV

Broadband Radiometer 230 … 1000 nm

specbos 1211 UV is a broadband miniaturized and fast spectroradiometer which can be used for spectral Radiance as well as spectral Irradiance measurements in the wavelength range of 230 … 1000 nm.

Highlights:

- Wavelength range from UV to NIR
- High sensitivity
- Radiance as well as Irradiance measuring modes
- Action spectra can be applied
- Small and easy to use
- NIST traceable calibration
- Measurement also possible with DLLs or SCPI compatible commands

Software **JETI LiVal** (for a demo version see www.jeti.com):

- Intuitive operation
- Weighting the obtained spectrum with an action function
- Classification of samples
- Easy data export to Excel and CSV
- Automatic detection of attached accessories
- Specific calculations as PAR, circadian metrics and metamerism according to ISO 23603

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

Specifications

Optical parameters	
Spectral range	230 … 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 - Ø6 mm; 100 cm - Ø31 mm (luminance mode)
Measuring values	Spectral Radiance/ spectral Irradiance Luminance / total and weighted Radiance Illuminance / total and weighted Irradiance Chromaticity coordinates x,y; u',v' Correlated Color Temperature, Color purity CRI, CQS, RGB Circadian metrics, Photosynthetically Active Radiation
Measuring ranges and accuracies	
Measuring range luminance	0.1 ... 2 500 cd/m² (Ill. A) 0.1 ... 1 800 cd/m² (typical white LED) (higher values with optional filter)
Measuring range illuminance	2 … 20 000 lx (Ill. A) 2 ... 15 000 lx (typical white LED) (higher values with optional diffusor/ filter combination)
Luminance accuracy	±2 % (@ 1 000 cd/m² and ill. A)
Luminance repeatability	±1 % (@ 1 000 cd/m² and ill. A)
Chromaticity accuracy	±0.002 x, y (Ill. A)
Color repeatability	±0.0005 x, y (Ill. A)
CCT repeatability	±20 K (Ill. A)
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 LiVal for Windows 7/ 8/ 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)	Netbook with installed software (for mobile applications) Filters, side view and fiber extended diffusors, add on optics (see: www.jeti.com)
Calibration	NIST traceable
Recommended interval	1 year