specbos 1211 UV

specbos 1211 UV is a broadband and fast spectroradiometer which can be used for the measurement of hazardous radiation, especially according to the directive 2006/25/EC.
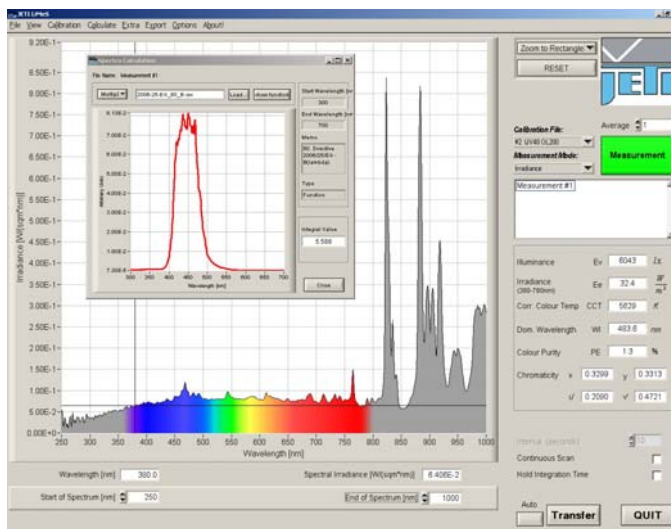
The following measuring values are supplied:

- Radiometric spectrum, weighted radiometric spectrum
- Luminance, Radiance, weighted Radiance
- Illuminance, Irradiance, weighted Irradiance
- xy and u´v´ coordinates, RGB values
- Dominate wavelength, Color purity
- Correlated Color Temperature
- Color Rendering Index

Highlights:

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

Software LiMeS (for a demo version see www.jeti.com):

- Intuitive operation
- allows to weight the obtained spectrum with a function
- output of integral value of the weighted spectrum
- includes functions as effect of UV radiation on eye and skin as well as thermal and photochemical injury of the eye
- can be extended by customer specific functions

Screenshot of a Xe lamp spectrum, inserted is a spectrum weighted with the function of the photochemical injury caused to the eye by blue light radiation (B(λ))

Specification

Optical parameters
Spectral range	250 … 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 - $\varnothing$ 6 mm; 100 cm - $\varnothing$ 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 ... 2 500 cd/m^2 (higher values with optional filter)
Measuring range illuminance	2 … 20 000 lx
Luminance accuracy	$\pm$ 2 % (@ 1 000 cd/m^2 and 2856 K)
Luminance repeatability	$\pm$ 1 %
Chromaticity accuracy	$\pm$ 0.002 x, y (@ 2856 K)
Color repeatability	$\pm$ 0.0005 x, y
CCT repeatability	$\pm$ 20 K (@ 2856 K)
Wavelength accuracy	$\pm$ 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 2000/ XP/ Vista/ 7
	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 measurment)
	Luminous intensity measurement set up (CIE 127, cond. A and B)
	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