



## Spectroradiometer specbos 1201 flash

**specbos 1201 flash** is a spectroradiometer which can measure continuously pulsed, single pulse as well as cw light sources. It can be used in laboratory and production environment to measure the following quantities:

- Luminous exposure (pulse)
- Luminance, Radiance (cw)
- Illuminance, Irradiance (cw)
- $xy$  and  $u'v'$  coordinates
- Dominate wavelength, Color purity
- Correlated Color Temperature
- Color Rendering Index
- Circadian metrics, Photosynthetically Active Radiation (only cw)



Pulsed sources are measured in illuminance mode using the diffuser cap. The instrument measures the cycletime of a pulsed source with an additional detector in the front face. The following spectral measurement will be synchronized with the measured lamp cycle. Radiometric and photometric values are indicated in exposure per puls.

### Advantages:

- USB powered
- optical synchronisation to continuously pulsed sources, no electrical clock signal necessary
- triggering of single pulses
- easy to install and to operate
- powerful, but easy manageable software
- DLLs and firmware measuring commands

### Measuring objects:

- Pulsed sources as emergency lights, flash lamps, shoppered lamps and slowly pulsed LEDs
- Continuous and quasi-continuous sources as TV, Monitors, LCD-, LED-Displays, digital projectors, traffic lights, car lights

# Specification

## Optical parameters

Spectral range	380 nm ... 780 nm
Optical bandwidth	5 nm
Wavelength resolution	1 nm
Digital electronic resolution	15 bit ADC
Viewing angle	1,8° (luminance)
Measuring distance/ diameter	20 cm - Ø 6 mm; 100 cm - Ø 31 mm (luminance)

## Measuring values

Pulsed sources:	Spectral radiant exposure Integral luminous and radiant exposure Chromaticity coordinates x,y; u',v' Correlated Color Temperature, Color purity, Color Rendering Index
CW sources:	Spectral radiance / irradiance, Integral luminance / radiance, Integral illuminance / irradiance Chromaticity coordinates x,y; u',v' Correlated Color Temperature, Color purity, Color Rendering Index Circadian metrics, Photosynthetically Active Radiation

## Measuring ranges and accuracies

Measuring range luminous exposure per puls (integrated illuminance)	200 ... 5000 lx·s (single flash) 5 ... 5000 lx·s (flash sequence)
Pulse frequency	0.2 ... 20 Hz
Measuring range luminance	2 ... $7 \cdot 10^4$ cd/m <sup>2</sup> (higher values with optional filter)
Luminance accuracy	± 2 % (@ 1000cd/ m <sup>2</sup> and 2856 K)
Luminance repeatability	± 1 %
Chromaticity accuracy	± 0.002 x, y (@ 2856 K)
Color repeatability	± 0.0005 x, y
Wavelength accuracy	± 0.5 nm

## Other technical data

Dispersive element	Imaging grating (flat field)
Light receiving element	Photodiode array 1024 pixel (binned)
Power supply	Hub powered
Interface	USB 2.0 fullspeed
Dimensions	140 mm x 58 mm x 34 mm
Weight	350 g
Accessories (included)	PC software JETI LiMeS for Windows 2000/XP/ Vista DLL, LabVIEW VI's USB cable and trigger connector 2 Cosine diffusors (for irradiance measurement) Calibration certificate, operation instructions Tripod, transport box
NIST traceable calibration	Recommended interval: one year