



Spectroradiometer specbos 1211 focus

specbos 1211 focus can be used for the measurement of small luminous sources such as alphanumeric or symbolic displays, back illuminated signs and mini CCFL tubes. Front-end optics for measuring diameters of 3, 1 and 0.5 mm are available. The 0.5 mm version will be adjusted with a magnifying glass to increase positioning precision.



specbos 1211 with focusing attachment for 0.5 mm

All optics can be attached easily to the basic instrument by screwing. The used version of the front-end is automatically detected by the instrument and the appropriate calibration data set will be applied.

Examples for measuring objects:

- Alphanumeric and numerical displays
- Fluorescent tubes with small diameter
- Back illuminated signs
- Other small light sources

Front-end optics	#1	#2	#3
Measuring diameter	3 mm	1 mm	0.5 mm
Measuring distance	70 mm	26 mm	46 mm
Field of view	2.1°	1.9°	0.6°
Length	77 mm	26 mm	77 mm

Remark: The attachments cannot be used with a standard specbos 1211, they have to be ordered together with a specbos 1211 focus.

Specification

Optical parameters

Spectral range	350 nm ... 1000 nm
Optical bandwidth	4.5 nm
Wavelengths resolution	1 nm
Digital electronic resol.	15 bit ADC

Measuring values for focus mode

Spectral radiance
Total luminance / total radiance
Chromaticity coordinates x,y; u',v'
Correlated Color Temperature, Color purity
Color Rendering Index
Circadian metrics, Photosynthetically Active Radiation
(the instrument can also be used without front-end optics)

Measuring ranges and accuracies

Measuring range	approx. 0.5 ... 3 000 cd/m ²
Luminance accuracy	± 4 % (@ 100 cd/ m ² and 2856 K)
Luminance repeatability	± 2 %
Chromaticity accuracy	± 0.003 x, y (@ 2856 K)
Color repeatability	± 0.0005 x, y
CCT repeatability	± 30 K (@ 2856 K)
Wavelength accuracy	± 0.5 nm

Other technical data

Dispersive element	Imaging grating (flat field)
Light receiving element	Photodiode array 2048 pixel (binned)
Power supply	Hub powered
Interface	USB 2.0 fullspeed
Dimensions	180 mm x 82 mm x 53 mm (without front-end optics)
Weight	450 g (without front-end optics)
Operating conditions	Temperature 10 ... 35 °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 Focusing optics (please select the versions) Cosine diffusor (for irradiance measurement) Calibration certificate, operation instructions Tripod, transport box
NIST traceable calibration	Recommended interval: one year
Ordering number	specbos 1211 focus /3 /1 and/ or /0.5 (any front-end optics can only be ordered in connection with a specbos 1211 focus, it is not possible to update a standard unit to a focus unit)

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