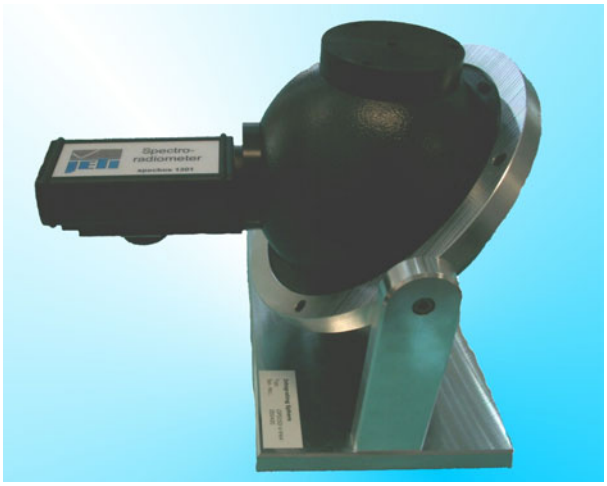
Spectroradiometer

specbos 1301

specbos 1301 is a VIS spectroradiometer for the measurement of light sources in Radiant Flux mode, using an Integrating sphere.
The included easy-to-use software has the full complement of radiometric and colorimetric functions requisite for quality control applications and selection of samples.



Applications:

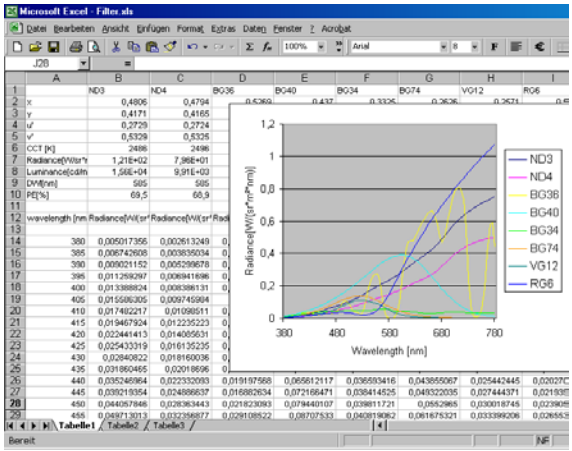
- Radiometric and colorimetric characterization of
  – LED
  – Miniature lamps
  – Fiber optic output

Advantages:

- USB powered – mobile! – no extra power supply
- Automatic determination of measuring time
- Excel spread sheets

Measuring values:

- Radiant Flux, Luminous Flux,
- Spectral Radiant Flux
- xy and u´v´ coordinates
- Dominate wavelength
- Color purity
- Correlated Color Temperature
- Color Rendering Index



Integrating spheres of 50 ... 150mm diameter are available. A baffle avoids the inclusion of the first reflex to the measurement. Other sphere sizes and designs are possible.

Input port design will be adapted to user demands. Customer specific sample holders can be offered.

The basic measuring unit can also be used for radiance and irradiance measurements.

Specifications

Optical parameters		
Spectral range	380 nm ... 780 nm	
Optical bandwidth	5 nm	
Wavelength resolution	1 nm	
Digital electronic resolution	15 bit ADC	
Dispersive element	Diffraction grating	
Light receiving element	Photodiode array 1024 pixel (binned)	
Measuring values	Spectral Radiant Flux Total Radiant Flux/ Luminous Flux Chromaticity coordinates x,y; u',v' Correlated Color Temperature Dominant wavelength, color purity Color Rendering Index	
Measuring ranges and accuracies		
Measuring range Luminous Flux	1 lm ... 4000 lm	
Luminous Flux accuracy	depending from integrating sphere	
Luminous Flux reproducibility	depending from integrating sphere	
Chromaticity accuracy	± 0.002 x, y (@ 2856 K)	
Color reproducibility	± 0.0005 x, y	
CCT reproducibility	± 20 K (@ 2856 K)	
Wavelength accuracy	± 0.5 nm	
Other technical data		
Integrating sphere diameter	50 … 150 mm (others on request)	
Interface	USB 2.0 fullspeed	
Operating conditions	Temperature Humidity	10 ... 40 °C < 85 % relative humidity at 35 °C
Power supply	Hub powered	
Accessories (included)	Integrating sphere Cosine diffusor (for irradiance measurement) PC software JETI LiMeS for Windows 2000/XP DLL, LabVIEW VI's Operation instructions Calibration certificate USB cable	
NIST traceable calibration	Recommended interval: one year	

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