



spectraval

VIS Spectroradiometer

spectraval is a compact spectroradiometer for the visible spectral range. It is available in a version without display (1501) and one with display (1511). Both can be used for spectral Radiance measurement with a measuring angle of 2° . The actual measuring area is marked by a red circle.

spectraval 1511 can be operated in stand alone mode or in connection with a computer. **spectraval 1501** always needs a computer, but can be used with several special programs, e.g. for monitor calibration.



Advantages:

- ◆ Compact solutions
- ◆ Fast measurement
- ◆ Precise results due to high quality spectrograph and NIST traceable calibration
- ◆ Comfortable handling due to Bluetooth connection

Examples for applications:

- ◆ Calibration of broadcast monitors
- ◆ Color adjustment of digital projectors
- ◆ Measurement of LED displays

spectraval 1511 displays the following values:

- ◆ Luminance, Radiance
- ◆ xy and $u'v'$ coordinates, RGB values
- ◆ Dominate wavelength, color purity
- ◆ Correlated Color Temperature
- ◆ Color Rendering Index
- ◆ Radiometric spectrum

More quantities as CQS can be obtained using the PC software LiVal (demo version see: www.jeti.com).



Specifications

Optical parameters

Spectral range	380 ... 780 nm
Optical bandwidth	4.5 nm
Wavelength resolution	1 nm
Digital electronic resolution	16 bit ADC
Viewing angle	1,8°
Measuring distance/ diameter	20 cm - Ø 6 mm; 100 cm - Ø 31 mm

Measuring values

Spectral Radiance
Total luminance / total Radiance
Chromaticity coordinates x,y; u',v'
Correlated Color Temperature, color purity
Color Rendering Index, RGB and other

Measuring ranges and accuracies

Measuring range luminance	0.1 ... 150 000 cd/m ² (III. A) 0.1 ... 100 000 cd/ m ² (typical white LED)
Luminance accuracy	± 2 % (@ 100 cd/m ² and III. A)
Luminance repeatability	± 1 %
Chromaticity accuracy	± 0.002 x, y (III.A)
Color repeatability	± 0.0005 x, y (III.A)
CCT repeatability	± 20 K (III.A)
Wavelength accuracy	± 0.5 nm

Other technical data

Dispersive element	Imaging grating (flat field)
Light receiving element	CCD line array 2048 pixels (binned)
Power supply	Battery and USB powered
Interface	USB 2.0 fullspeed, specbos 1501 optional with LAN
Dimensions	
spectraval 1501	140 mm x80 mm x 70 mm
spectraval 1511	140 mm x115 mm x 70 mm
Weight	
spectraval 1501	400 g
spectraval 1511	500 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's USB cable and trigger connector Calibration certificate, operation instructions Tripod, transport box
Calibration	NIST traceable
Recommended interval	1 year



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