



# JETI Technische Instrumente

Spectrometric Solutions from Components to Systems

## spectraval 1511NIR

### Stand alone Spectroradiometer

**spectraval 1511NIR** is a compact spectroradiometer for the visible and near infrared wavelength range. It has a display and can be used for spectral Radiance measurement with a measuring angle of  $2^\circ$ . The actual measuring area is marked by a red circle.

**spectraval 1511NIR** can be operated in stand alone mode (using the display program) or in connection with a computer (using the included software JETI LiVal or special programs for monitor calibration as CalMAN, LightSpace CMS, ChromaPure).

#### Advantages:

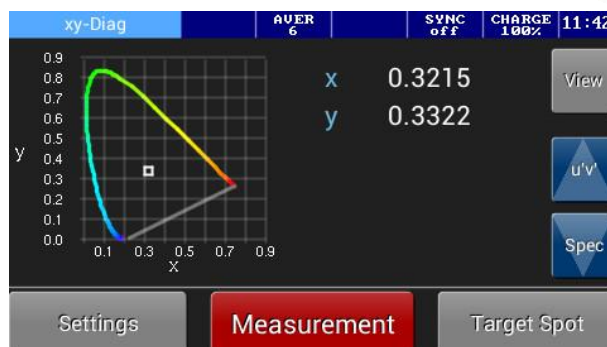
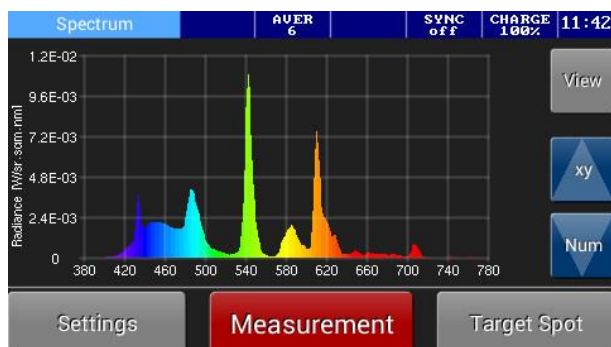
- ◆ Compact solutions
- ◆ Fast measurement
- ◆ Precise results due to high quality spectrograph and NIST traceable calibration
- ◆ Comfortable handling due to Bluetooth connection

#### Examples for applications:

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

#### spectraval 1511NIR displays the following values:

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





## Specifications

### Optical parameters

Spectral range	350 ... 1000 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

With optional diffusor

### Measuring ranges and accuracies

Measuring range luminance	0.1 ... 150 000 cd/m <sup>2</sup> (III. A) 0.1 ... 100 000 cd/ m <sup>2</sup> (typical white LED)
Luminance accuracy	± 2 % (@ 100 cd/m <sup>2</sup> 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
Polarization error	< 2 % (f8)
Measuring range illuminance (with optional diffusor)	2 ... 1 000 000 lx (III. A) 2 ... 740 000 lx (typical white LED)

### Other technical data

Dispersive element	Imaging grating (flat field)
Light receiving element	CCD line array 2048 pixels (binned)
Power supply	Battery and USB powered
Interfaces	USB 2.0 fullspeed Bluetooth
Dimensions	140 mm x 115 mm x 70 mm
Weight	500g
Operating conditions	Temperature 10 ... 40 °C Humidity < 85 % relative humidity at 35 °C
Accessories (included)	PC software <i>JETI LiVal</i> for Windows 7/ 8/ 10 Software development kit USB cable and trigger connector Bluetooth stick, Battery charger Calibration certificate Tripod, transport box Operating instructions
Calibration	NIST traceable
Recommended interval	1 year