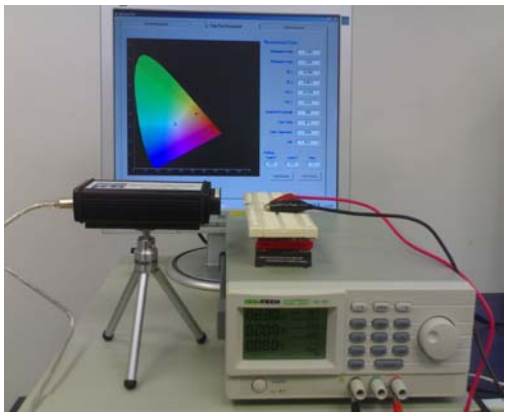
VS-101 Test and Measurement System

Vs-101 uses Jeti specbos 1x0x precise and compact VIS spectroradiometers for spectrum measurement. They can be used in laboratory as well as production environment to measure the following quantities:

- Luminance, Radiance
- Illuminance, Irradiance
- xy and u´v´ coordinates
- Dominate wavelength, Color purity
- Correlated Color Temperature
- Color Rendering Index (CRI)
- Circadian metrics, Photosynthetically Active Radiation



VS-101 can be configured to measure the Luminous Intensity and Luminous Flux with the optional accessories as below.

Integrating Sphere for luminance flux (scb1301)

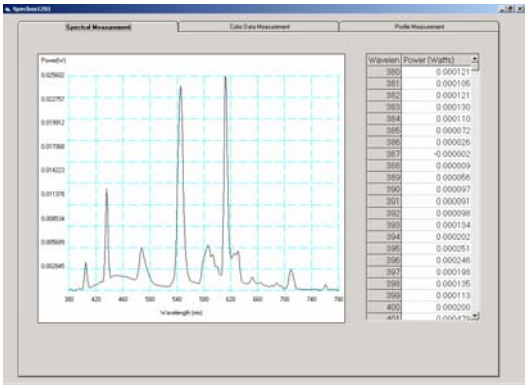
CIE condA and B tube for luminance intensity (scb1401)

SMT and 2 pins LED holder

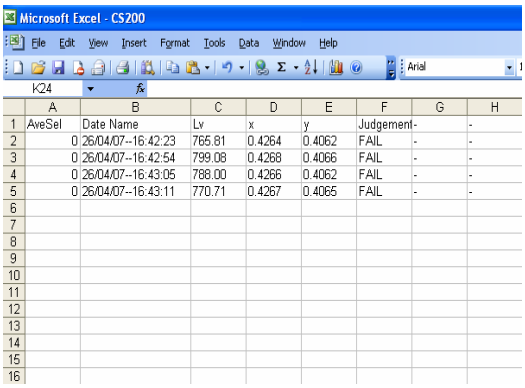
0 to 40V DC programmable power supply to drive the LED

SOFTWARE

The VS-101 can be operated with the intuitive measuring software. All the raw capture data is save as Excel format and can be used for further processing



Screen shot of Main software Interface



	A	B	C	D	E	F	G	H
1	AveSel	Date Name	Lv	x	y	Judgement	-	-
2	0	26/04/07--16:42:23	765.81	0.4264	0.4062	FAIL	-	-
3	0	26/04/07--16:42:54	799.08	0.4268	0.4066	FAIL	-	-
4	0	26/04/07--16:43:05	788.00	0.4266	0.4062	FAIL	-	-
5	0	26/04/07--16:43:11	770.71	0.4267	0.4065	FAIL	-	-
6								
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Display of the exported data in Microsoft Excel

Intuitive features make users productive quickly and comfortably. The workflow is truly convenient for beginners to simply adapt to the software operation

Furthermore, the data can be directly export to printer if the printer is available.

ADVANTAGES:

- USB powered
- Internal target spot laser (luminance measurement)
- Easy to install
- Start of measurement with external trigger signal (short cut or TTL)

APPLICATIONS / MEASURING OBJECTS:






•TV, Monitors, LCD-, LED-Displays • Digital projectors • Traffic lights, car lights
• Room illumination • Lamps, LEDs

SPECIFICATION:

Optical parameters :	Spectral range 380 nm ... 780 nm
Optical bandwidth:	5 nm (specbos 1201), 9 nm (specbos 1201 M)
Wavelengths resolution:	1 nm
Digital electronic resolution:	15 bit ADC
Viewing angle:	1,8°
Measuring distance/ diameter:	20 cm - ⌀ 6 mm; 100 cm - ⌀ 31 mm (luminance)
Measuring values:	Spectral radiance Total luminance / total radiance Total illuminance / total 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 luminance:	2 ... 7 x 10^4 cd/m^2 (higher values with optional filter)
Measuring range illuminance:	20 ...5 x 10^5 lx
Luminance accuracy:	± 2 % (@ 1000cd/ m^2 and 2856 K)
Luminance repeatability:	± 1 %
Chromaticity accuracy:	± 0.002 x, y (@ 2856 K)
Color repeatability:	± 0.0005 x, y
CCT repeatability:	± 20 K (@ 2856 K)
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
Operating conditions Temperature	10 ... 40 °C Humidity < 85 % relative humidity at 35 °C
Accessories (included)	PC software JETI LiMeS for Windows 2000/XP DLL, LabVIEW VI's USB cable and trigger connector Cosine diffusor (for irradiance measurement) Calibration certificate, operation instructions Tripod, transport box
Accessories (optional)	Integrating spheres of different diameters, Luminous intensity measurement set up (CIE 127, cond. A and B) High precision LED holder (2pin and SMT type) 0-40V, 0-5A DC programmable power supply
NIST traceable calibration	Recommended interval: one year

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