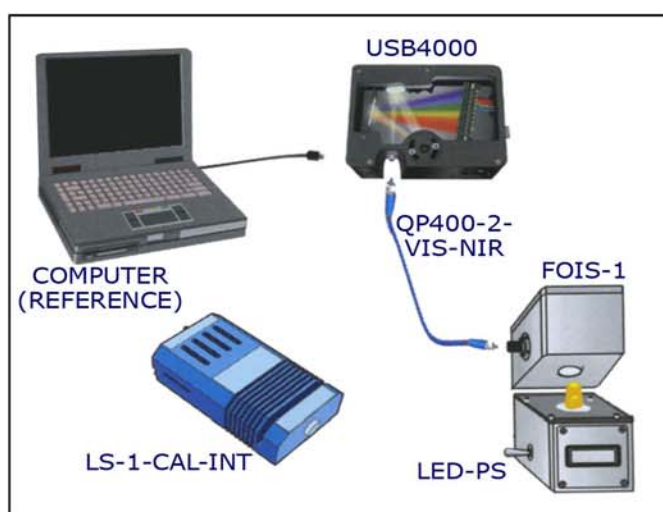
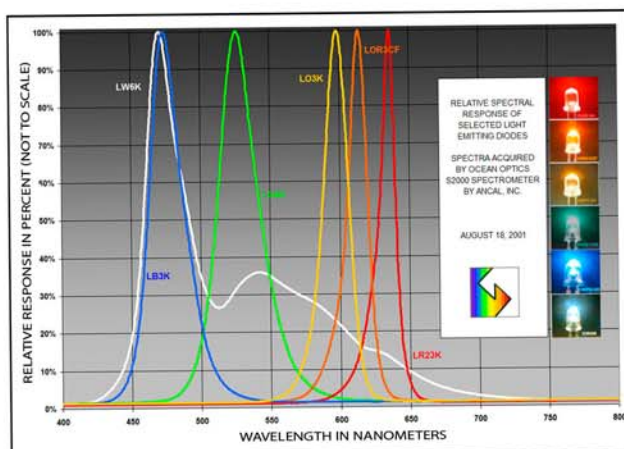


## LED ANALYSIS

The spectral response and intensity of LEDs may be readily measured by use of the system shown below. These analyses provide both manufacturers and users of LED with basic data on specific LED characteristics.

The advantage of using this system is that not only can relative spectral response be measured but radiometric calibration can be implemented by use of the LS-1-CAL tungsten halogen source and the FOIS-1 integrating sphere. In making these measurements, the LED under test is put in the NIST traceable power supply. The integrating sphere is placed over the LED and can precisely respond to the light coming from the LED. The LS-1-CAL source provides accurate reference for the measurements.



The suggested setup for measurements of spectral response and absolute spectral output includes the LED power supply, the integrating sphere and Ocean Optics' USB4000 miniature fiber optic spectrometer. For optimum performance, the USB4000 is configured with a 25 un slit, a number 2 grating, an L4 collection lens and an OFLV 350-1000 order sorting filter. This configuration will maximize the system sensitivity.

The calibrating light source, LS-1-CAL-INT, fits into the reference port of integrating sphere to provide accurate traceable calibration of the system. With SpectraSuite software, both the operation of the spectrometer is controlled, and absolute irradiance, color space, CCT, and other pertinent calculations are made.

### System Prices

USB4000	Plug and play spectrometer	US\$ 2,540.00
Grating number 2	Grating installed, 350 - 1000 nm spectral range	Included
25 micron slit	Slit, installed in spectrometer entrance	Included
L4 lens	Detector collection lens, installed	174.00
OFLV-350-1000	Order sorting filter	263.00
LS-1-CAL-INT	Tungsten halogen calibrate light source	866.00
LED-PS	LED power supply	577.00
FOIS-1	Integrating sphere (emission)	848.00
QP400-2-VIS-NIR	Premium grade fiber optic cord, 400 um diameter by 2 meters	242.00
SpectraSuite	Cross-platform spectroscopy operating software	199.00

Prices are subject to change without notice. FOB point is Nevada, USA

The above items are available from:



Ancal, Inc., Henderson, Nevada 89053-0100, USA  
Telephone: 1-702-434-1501 Fax: 1-602-532-7018