Ocean Optics USB4000-UV-VIS Spectrometer
USB4000 Preconfigured, 200-850 nm

Specifications

Physical	
Dimensions:	89.1 mm x 63.3 mm x 34.4 mm
Weight:	190 grams
Detector Specifications	
Detector:	Toshiba TCD1304AP Linear CCD array
Detector range:	200-1100 nm
Pixels:	3648 pixels
Pixel size:	8 µm x 200 µm
Pixel well depth:	100,000 electrons
Signal-to-noise ratio:	300:1 (at full signal)
A/D resolution:	16 bit
Dark noise:	50 RMS counts
Corrected linearity:	>99.8%
Sensitivity:	130 photons/count at 400 nm; 60 photons/count at 600 nm
Optical Bench	
Design:	f/4, Asymmetrical crossed Czerny-Turner
Focal length:	42 mm input; 68 mm output
Entrance aperture:	25 µm wide slit
Grating:	600 grooves/mm, Grating #3 (blazed at 500 nm)
OFLV filter:	OFLV-350-1000
Fiber optic connector:	SMA 905 to 0.22 numerical aperture single-strand optical fiber
Spectroscopic	
Wavelength range:	350-1000 nm
Optical resolution:	~1.5 nm FWHM
Signal-to-noise ratio:	300:1 (at full signal)
A/D resolution:	16 bit
Dark noise:	50 RMS counts
Integration time:	4 ms - 10 seconds
Dynamic range:	2 x 10^8 (system), 1300:1 for a single acquisition
Stray light:	<0.05% at 600 nm; 0.10% at 435 nm
Electronics	
Power consumption:	250 mA @ 5 VDC
Data transfer speed:	Full scans to memory every 4 ms with USB 2.0 port

Inputs/Outputs:	Yes, 8 onboard digital user-programmable GPIOs
Breakout box compatible:	Yes, with the USB-ADP-BB adapter
Trigger modes:	4 modes
Strobe functions:	Yes
Connector:	22-pin connector
Computer	
Operating systems:	Windows 98/Me/2000/XP, Mac OS X and Linux with USB port; Any 32-bit Windows OS with serial port
Computer interfaces:	USB 2.0 @ 480 Mbps (USB1.1 compatible); RS-232 (2-wire) @ 115.2 K baud
Peripheral interfaces:	SPI (3-wire); I2C inter-integrated circuit