Maya Series

The new standard in UV spectroscopy

Maya Series

The Maya series of spectrometers are particularly well suited for measurements in the UV range. Due to their high sensitivity, Maya spectrometers are also very well suited for low light level applications that require low detection limits and great dynamic range.

Applications

» Health Care measurements
» Light analysis
» Environmental monitoring
» Medical analysis
» Chemical research
» Physical characterisation
» Biology measurements

Features

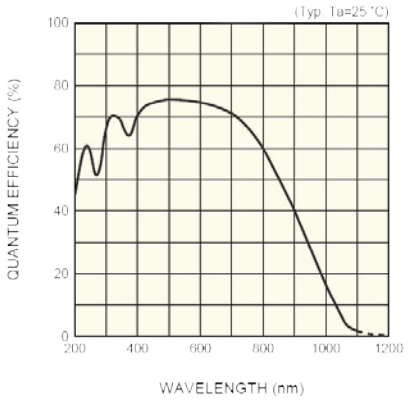
» Back-thinned 2D FFT-CCD detectors
» Optional propriety order-sorting filters
» USB interface
» Fully programmable strobe signals (single or continuous)
» 10 onboard digital user-programmable GPIOs
» Optical resolution up to ~ 0.035 nm FWHM

Advantages

» Excellent UV response
» Great signal-to-noise characteristics
» Wide dynamic range
» Up to 90% quantum efficiency
» No need for UV-sensitive coatings
» Low-noise electronics
» User friendly
» Runs on Windows, Mac OS or Linux

Specifications

	Maya2000	Maya2000 Pro
DETECTOR		
Type	Backthinned 2D CCD Detector	Backthinned 2D CCD Detector
Detector range	165 – 1100 nm	155 – 1100 nm
Active Pixels	2048 x 14	2048 x 64
Pixel size	14 µm x 14 µm	14 µm x 14 µm
Pixel well depth	130 Ke-	200 Ke-
Peak QE	> 90 %	75 %
QE @ 250 nm	55 %	65 %
Sensitivity	~ 0.45 counts / e-	~ 0.32 counts / e-
SPECTROSCOPIC		
Wavelength range	max. 900 nm	max. 900 nm
Optical resolution	~ 0.035 - 6.8 nm (FWHM)	~ 0.035 - 6.8 nm (FWHM)
Signal-to-noise ratio	350 : 1	450 : 1
Dark noise	7 RMS counts	5.5 RMS counts
Dynamic range typical	8000 : 1	12000 : 1
Dynamic range guaranteed	5000 : 1	8000 : 1
Integration time	13 ms - 20 sec	13 ms - 10 sec
OPTICAL BENCH		
Design	f/4, Symmetrical crossed Czerny-Turner	f/4, Symmetrical crossed Czerny-Turner
Focal length	101.6 mm input and output	101.6 mm input and output
Entrance aperture	5, 10, 25, 50, 100 or 200 µm	5, 10, 25, 50, 100 or 200 µm
Grating options	14 different grating options, including the HC-1 composite grating.	14 different grating options, including the HC-1 composite grating.
Fibre optic connector	SMA 905 to 0.22 numerical aperture single-strand optical fibre	SMA 905 to 0.22 numerical aperture single-strand optical fibre
PHYSICAL		
Dimensions	149 x 109.3 x 50.4 mm	149 x 109.3 x 50.4 mm
Weight	960 grams	960 grams
ELECTRONICS		
Power consumption	500 mA @ 5 VDC	500 mA @ 5 VDC
Data transfer speed	Full spectrum every 5 ms with USB 2.0 port	Full spectrum every 8 ms with USB 2.0 port
Inputs/Outputs	10 onboard digital user-programmable GPIOs	10 onboard digital user-programmable GPIOs
COMPUTER		
Operating systems	Windows, Mac, Linux	Windows, Mac, Linux
Computer interfaces	USB 2.0 @ 480 Mbps; RS-232 (2-wire) @ 115.2 K baud	USB 2.0 @ 480 Mbps; RS-232 (2-wire) @ 115.2 K baud
Peripheral interfaces	SPI (3-wire); I²C integrated circuit	SPI (3-wire); I²C integrated circuit



Spectral response of the Maya2000 Pro

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