

MSLR - 3221

Micro Spectro Laser Raman



EPCC / PRODUCTS / APPLICATION / SOFTWARE / ACCESSORIES / CONSUMABLES / SERVICES

Analytical Technologies Limited

An ISO 9001 Certified Company

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►► Specifications

Equipment Type	Upright
Optical System	Colour Corrected Infinity Optical System
Observation	7" Touch Display Unit with a dedicated PC
Sample Stage	Stepper motor controlled
Objectives	5x, 10x, 20x, 40 x and 60x Plan objectives confocal objective lens
Tube Length	200 mm
Turret	Motorized positioning and 4 slots for keeping
Condenser	Abbe condenser
Focus	Motorized Stepper motor controlled
Illumination for imaging	Top, Bottom, and Co-Axial HB-LED Based
Illumination Control	Continuously Variable PC controlled

►► Raman

Laser wavelength	532 nm
Type	Low noise variable power 100mW DPSS Laser
Shutter	Solenoid / Motorized Type
Spectrometer Type	Czerny-Turner
Focal Length	200 mm
Focal Ratio	f / 4
Spectral range	4000 ~ 100 cm ⁻¹ (Raman)
Spectral Resolution	0.95 cm ⁻¹

►► Photoluminescence

Spectrometer Type	Czerny-Turner
Focal Length	200 mm
Focal Ratio	f / 4
Spectral Range	400 - 900 nm
Spectral Resolution	0.1 nm

►► Imaging Camera Specifications

Optical format	1 / 2.5" CMOS
Active imager size	5.70 mm x 4.28 mm, 7.13 mm diagonal
Active pixels	2592 x 1944 (5Mp)
Pixel size	2.2 x 2.2 μ m
Color filter array	RGB Bayer pattern
Shutter type	Global reset release (GRR), Snapshot only, Electronic rolling shutter (ERS)
Maximum data rate / master clock	96 Mp / s at 96 MHz (2.8 V I / O)
Frame rate	Full resolution - Programmable up to 15 fps VGA (640 x 480 with binning) - programmable up to 70 fps
ADC resolution	12 - bit, on-chip
Pixel dynamic range	70.1 dB
Operating temperature	-30°C to +70°C
Software	Holmarc Micro / Spectra Analyser PRO

►► Raman Filter Set Details

- 532nm, 25mm Dia., OD 6.0 Blocking Notch Filter
- Center Wavelength CWL (nm) : 532.00
- Optical Density OD (Average) : ≥ 6.0
- Coating : Hard Coated
- Full Width - Half Max FWHM (nm) : 17.00
- Surface Quality : 60 - 40
- Transmission (%) : 350 - 400nm : $T_{avg} > 80$, 400 - 1200nm : $T_{avg} > 90$
- Transmission Wavelength (nm) : 350 - 1200
- 532 nm RazorEdge Dichroic laser beamsplitter
- Edge Wavelength 1537.2 nm
- Transmission Band 1 $T_{avg} > 93\%$ 538.9 - 824.8 nm
- Angle of Incidence 45 degrees with a shift of $\leq 0.20\%$ / degree
- Cone Half-angle 0.5 degrees
- Optical Damage Rating 1 J/cm² @ 532 nm (10 ns pulse width)

- Steepness Ultra Steep
- Laser Wavelength 1 532 nm
- Edge Steepness (%) 0.5%
- Edge Steepness (nm) 2.7 nm
- Edge Steepness (cm-1) 93.5 cm-1
- Transition Width (nm) 5.3 nm
- Transition Width (cm-1) 186 cm-1

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3007



Optima Gas
Chromatograph
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Flash
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Spectrophotometer



Liquid Particle
Counter



Optical Emission
Spectrophotometer



DSC/TGA



Semi Auto Bio
Chemistry Analyzer



HEMA 2062
Hematology
Analyzer



Micro Plate
Reader/Washer



URINOVA 2800
Urine Analyzer



Total Organic
Carbon 3800



Fully Automated
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system

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