

# DXR3xi Raman Imaging Microscope

- Exceptional stability for highest quality Raman imaging over small and large areas
- Intelligent autofocus and automated feature identification tools reduce total experiment time
- Powerful, real-time component analysis
- Visual control and parameter optimization lets you focus on the answer, not the technique



## Performance specifications

Spatial resolution	Resolution (X, Y axes)	Better than 0.5 $\mu\text{m}$
	Confocal depth resolution	Better than 2 $\mu\text{m}$

## Automated polarization

Laser polarization	Horizontal, vertical, or depolarized
Analyzer polarization	Not in beam, horizontal, vertical, or custom angle ( $1^\circ$ increments) Imaging with polarization is possible

## Spectrograph

Design	Triplet spectrograph	No moving parts
	Camera technology	TE cooled back illuminated EMCCD TE cooled front illuminated EMCCD
Aperture	Four software-selectable apertures	25 and 50 $\mu\text{m}$ confocal pinhole apertures 25 And 50 $\mu\text{m}$ slit apertures

## Imaging performance

Typical image collection time	Single 100 $\mu\text{m}$ $\times$ 100 $\mu\text{m}$ image with 1 $\mu\text{m}$ image pixel size in both directions	35 seconds
	10 mm diameter tablet with 20 $\mu\text{m}$ image pixel size	11 minutes
Maximum spectral acquisition rate	600 spectra per second	
Maximum image area	101.6 mm $\times$ 76.2 mm	
Minimum image pixel size in X and Y	100 nm	
Minimum step size in Z	200 nm	

## Physical dimensions

Width	94 cm
Depth	68 cm
Height	61 cm
Weight	86 kg



## DXR3 family shared component specifications

Laser	455 nm	532 nm		633 nm		785 nm	
		(high brightness)	(high powered)	(high brightness)	(high powered)	(high brightness)	high powered)
Laser type	Frequency-stabilized single mode diode laser	Diode-pumped, solid state (DPSS)	Diode-pumped, solid state (DPSS)	HeNe gas	Single transverse mode, high power diode laser	Frequency-stabilized single mode diode laser	Multiple transverse mode, narrow-spectrum diode
Maximum laser output power	25 mW	24 mW	100 mW	20 mW	60 mW	80 mW	420 mW
Laser Power at Sample	Maximum power at sample 6 mW	Maximum power at sample 10 mW	Maximum power at sample 40 mW	Maximum power at sample 8 mW	Maximum power at sample 25 mW	Maximum power at sample 30 mW	Maximum power at sample 150 mW
Center wavelength	455 $\pm$ 0.2 nm	532 $\pm$ 1 nm	532 $\pm$ 1 nm	632.8 nm	632.8 nm	785 $\pm$ 0.2 nm	785 $\pm$ 0.5 nm
Transverse mode	TEM <sub>00</sub>	TEM <sub>00</sub>	–	TEM <sub>00</sub>	–	TEM <sub>00</sub>	–