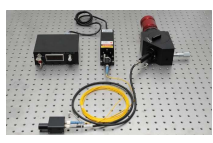



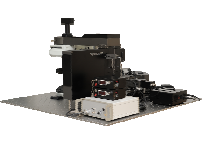


Specifications of Xper series

	XperRAM M Series	XperPC	XperRAM C Series	XperRAM S Series	XperRF
					
	For macro area	For photocurrent analysis	Compact	Standard	Hybrid (Raman + TRPL)
Basic features	<ul style="list-style-type: none"> Macro areal Raman analysis One laser/probe default setting Unlimited number of lasers/probes can be installed (ask for pricing) Photoluminescence (PL) 	<ul style="list-style-type: none"> Photocurrent imaging and analysis Ultra fast 2D scanning Bright field microscopic imaging Multiple laser selections Measurement capabilities for source/drain, gate dependence 	<ul style="list-style-type: none"> Confocal/3D Raman imaging and analysis Fast 2D scanning Bright field microscopic imaging Up to three laser/filter selections Interchangeable and rotatable volume phase holographic(VPH) grating selections Photoluminescence (PL) Electroluminescence (EL) 		
Fluorescence life time imaging(FUM)	X	X	X	X	O
Microscope		<ul style="list-style-type: none"> Reflected LED illuminator for bright field Mechanical X-Y stage with right-hand control Automatically controlled Z-axis position Includes main fram, stage plate, control box, interface cable, power cable 			
Objective		<ul style="list-style-type: none"> 10X, Long WD 40X 	<p><u>40X</u></p> <ul style="list-style-type: none"> Magnification: 40X Numerical aperture: 0.75 Working distance: 0.63mm >60% transmission from 360nm to 1000nm (Other objective options: 10X, 20X, 50X, 100X and long WD40X) 		
Laser Scanning Module		<ul style="list-style-type: none"> Wavelength range: 400-1000nm Laser scanning mode: Raster scan Scanning area: 200um x 200um (when using a 40X objective lens) Includes a 15MP camera for optical image acquisition (FOV: 220um x 150um when using 40X) A controller is included (USB 1.1) 			
Laser	<ul style="list-style-type: none"> 785nm Fiber coupled Raman laser 	<ul style="list-style-type: none"> Up to three laser options may be added 405, 532, 633, 785nm Freespace Fiber couple laser options also available 	<ul style="list-style-type: none"> 532nm Freespace 	<p><u>Up to three lasers may be chosen for RF, S series</u></p> <ul style="list-style-type: none"> 532nm Freespace 532nm Freespace for low frequency measurement 405nm Freespace 633nm Freespace 785nm Freespace 	
Optical Filter	<ul style="list-style-type: none"> 785nm Raman Probe 		<ul style="list-style-type: none"> 532nm Raman PL filter 	<p><u>Choose filters corresponding to laser wavelength</u></p> <ul style="list-style-type: none"> 532nm Raman PL filter 532nm Raman filter for low frequency measurement 405nm Raman PL filter 633nm Raman PL filter 785nm Raman PL filter 	
System Platform		<ul style="list-style-type: none"> 1 slot to connect a laser neutral density(ND) filter or polarizer 2 slots to connect polarizers or waveplates 	<ul style="list-style-type: none"> 1 slot to connect a laser neutral density(ND) filter or polarizer 2 slots to connect polarizers or waveplates 1 DPSS laser are installable Provides a robust platform for stable beam alignment 	<ul style="list-style-type: none"> 1 slot to connect a laser neutral density(ND) filter or polarizer 2 slots to connect polarizers or waveplates 1 slot to connect an interchangeable Raman-PL filter set Up to 3 DPSS laser are installable Provides a robust platform for stable beam alignment 	
Monochromator	<p><u>XPE 85E</u></p> <ul style="list-style-type: none"> Input aperture ratio: f/1.4 Focal length: 85mm Spectral range: Max. 3900cm⁻¹ Spectral resolution(FWHM): Min. 2.5cm⁻¹ 	For only XperPC specifications		<p><u>XPE 200 Monochromator</u></p> <ul style="list-style-type: none"> Input aperture ratio: f/5 Focal length: 35mm Spectral range: Max. 8150cm⁻¹ Spectral resolution(FWHM): Min. 3.1cm⁻¹ 	<p><u>XPE 35 Monochromator</u></p> <ul style="list-style-type: none"> Input aperture ratio: f/5 Focal length: 35mm Spectral range: Max. 8150cm⁻¹ Spectral resolution(FWHM): Min. 3.1cm⁻¹
Detector	<ul style="list-style-type: none"> Back-illuminated CCD Active pixels: 2000 x 256 pxls (Pixel size: 15 x 15um) Dark current: As low as 0.033 e⁻/pixel/sec Quantum efficiency: > 40% from 400nm to 1000nm 	<p>Photocurrent module</p> <ul style="list-style-type: none"> <u>On-stage plate</u> Vacuum chuck Slide glass groove <p><u>Probe tip</u></p> <ul style="list-style-type: none"> Material: Gold BeCu Size: 0.5 x 25mm Either bending type or straight type selectable 	<ul style="list-style-type: none"> Active pixels: 1931 x 1451 pxls (Pixel size: 4.54 x 4.54um) Dark current: ~ 0.0002 e⁻/pixel/sec Quantum efficiency: > 55% from 400nm to 700nm 	<ul style="list-style-type: none"> Back-illuminated CCD Active pixels: 2000 x 256 pxls (Pixel size: 15 x 15um) Dark current: As low as 0.033 e⁻/pixel/sec Quantum efficiency: > 40% from 400nm to 1000nm 	
Grating	<ul style="list-style-type: none"> 1200 l/mm at 840nm (optimal) (other gratings also available) 	<p>Sourcemeater Unit</p> <ul style="list-style-type: none"> Voltage range: 100mV ~ 40V Programming resolution: 5uV ~ 500uV Source accuracy(1 year): 0.02%+250uV ~ 0.02%+12mV Current range: 100nA ~ 10A Programming resolution: 2pA ~ 200uA Source accuracy (1 year): 0.06%+100pA ~ 0.06%+4mA 	<p><u>Choose as many as needed</u></p> <ul style="list-style-type: none"> 300 l/mm at 900nm 600 l/mm at 600nm 1200 l/mm at 840nm 1800 l/mm at 532nm 2400 l/mm at 450nm 		
NanoSpectrum Software Suite	<ul style="list-style-type: none"> Raman/PL spectrum acquisition & imaging 	<ul style="list-style-type: none"> Photocurrent acquisition & imaging 2D mapping data export format: .csv 	<ul style="list-style-type: none"> Raman/PL spectrum acquisition & imaging Spectrum data export format: .txt, .csv 2D mapping data export format: .spm, .csv Option: Photocurrent acquisition & imaging 	<ul style="list-style-type: none"> Raman/PL spectrum acquisition & imaging Spectrum data export format: .txt, .csv 2D mapping data export format: .spm, .csv Option: Photocurrent acquisition & imaging 	<ul style="list-style-type: none"> Raman/PL spectrum acquisition & imaging Spectrum data export format: .txt, .csv 2D mapping data export format: .spm, .csv Option: TRPL spectrum acquisition & imaging Option: Photocurrent acquisition & imaging
TCSPC Package	X	X	X	X	<ul style="list-style-type: none"> RF platform (switch box) Single Photon Avalanche Detector Time tagging electronics 405nm Picosecond pulsed diode laser and driver (other laser available upon request)

* The above specs are subject to change without prior notice for product enhancement