

Nikon Spinning Disk (Biosciences)

INSTRUMENT SPECIFICATION SHEET



BIOLOGICAL
OPTICAL
MICROSCOPY
PLATFORM

Location	Room G132 in Electron Microscope facility, Biosciences 2, Building 122					
Stand	Inverted Nikon Eclipse Ti-E (with optical autofocus system)					
Spinning Disk	Andor Revolution CSU-W1, Borealis, 50 micron disk, 4,000 rpm,					
Illumination	Transmitted			Fluorescence		
	12 V/100 W halogen lamp			EL6000 (100 W metal-halide lamp)		
Filters (for epi-fluorescence and TIRF)	Name	Excitation	Dichroic	Emission		
	DIC	--	--	--	Linear-polarized	
	GFP	470/40	495	525/50	suited for TIRF	
	GFP-RFP	488/15, 561/15	495, 575	525/40, 580 l-pass	suited for TIRF	
	GFP-RFP-CFP	442/15, 514/10, 561/10	455, 525, 575	480/40, 535/20, 640/120	suited for TIRF	
Lasers	Type		Wavelength [nm]		Max. output [mW]	
	Diode		405		25	
	Diode		445		35	
	Laser-pumped semiconductor		488		85	
	Diode-pumped solid-state (DPSS)		515		45	
	DPSS		561		35	
	Diode		640		30	
Stage control	Motorized x-y-z-stage, fine-control z-piezo (all control-able from PC), multi-position imaging					
Objectives Specification	Mag.	Type	NA	Working distance [mm]	Coverslip Thickness [mm]	Pixel size on EM-CCD [nm]
Plan Apo λ (MRD00105)	10x	Air	0.45	4	0.17 mm	1280 nm
Plan Apo λ (MRD00205)	20x	Air	0.75	1	0.17 mm	647 nm
S-Plan Fluor ELWD (MRD76521)	40x	Air	0.60	2.8 – 3.6	0 – 2 mm	327 nm
Apo LWD λ S (MRD77410)	40x	Water	1.15	0.59 – 0.61	0.15 – 0.19 mm	324 nm
Apo TIRF (MRD01691)	60x	Oil	1.49	0.12	0.13 - 0.19 mm (23°C)	215 nm
Apo TIRF (MRD01991)	100x	Oil	1.49	0.12	0.13 - 0.19 (23°C)	129 nm
Detectors	#	Type		Details		
	2	Andor Ixon Ultra (EM-CCD)		1024 x 1024, 16-bit. Dual-camera (simultaneous) detection		
	1	Andor Zyla 4.2 (sCMOS)		2048 x 2048, 12 or 16-bit. Ideal for wide-field images		
Software	Metamorph (preferred) or Andor Solis					
Holder	Slides, various sizes of petri dishes					

Applications	Live-cell imaging with heated/cooled chambers, gas flow, microfluidics, vertical-stage imaging, Fluorescence recovery after photo-bleaching (FRAP), total-internal reflection fluorescence (TIRF),
File Saving	External hard-drive
Extra features	