

# Nikon Spinning Disk (Biosciences)

## INSTRUMENT SPECIFICATION SHEET



BIOLOGICAL  
OPTICAL  
MICROSCOPY  
PLATFORM

<b>Location</b>	Room G132 in Electron Microscope facility, Biosciences 2, Building 122					
<b>Stand</b>	Inverted Nikon Eclipse Ti-E (with optical autofocus system)					
<b>Spinning Disk</b>	Andor Revolution CSU-W1, Borealis, 50 micron disk, 4,000 rpm,					
<b>Illumination</b>	<b>Transmitted</b>			<b>Fluorescence</b>		
	12 V/100 W halogen lamp			EL6000 (100 W metal-halide lamp)		
<b>Filters</b>  (for epi-fluorescence and TIRF)	<b>Name</b>	<b>Excitation</b>	<b>Dichroic</b>	<b>Emission</b>		
	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	
<b>Lasers</b>	<b>Type</b>		<b>Wavelength [nm]</b>		<b>Max. output [mW]</b>	
	Diode		405		25	
	Diode		445		35	
	Laser-pumped semiconductor		488		85	
	Diode-pumped solid-state (DPSS)		515		45	
	DPSS		561		35	
	Diode		640		30	
<b>Stage control</b>	Motorized x-y-z-stage, fine-control z-piezo (all control-able from PC), multi-position imaging					
<b>Objectives Specification</b>	<b>Mag.</b>	<b>Type</b>	<b>NA</b>	<b>Working distance [mm]</b>	<b>Coverslip Thickness [mm]</b>	<b>Pixel size on EM-CCD [nm]</b>
Plan Apo $\lambda$ (MRD00105)	10x	Air	0.45	4	0.17 mm	1280 nm
Plan Apo $\lambda$ (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 $\lambda$ 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
<b>Detectors</b>	<b>#</b>	<b>Type</b>		<b>Details</b>		
	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		
<b>Software</b>	Metamorph (preferred) or Andor Solis					
<b>Holder</b>	Slides, various sizes of petri dishes					

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