**3i Spinning Disk Confocal**

**Yokogawa CSU-W1 T1 Spinning Disk with 50um pinhole disk**

 17mm x 16mm FOV

**Prime 95B Back Illuminated sCMOS camera**

 1200x1200 pixels, 11x11um square pixels, 18.7mm FOV

 95% Quantum Efficiency

Speed 0 = 12 bit/82 fps or **12msec/image** - Gain only works in 12-bit mode

Speed 1 = 16-bit/41 fps or **24msec/image**

 Note: Binning on a CMOS camera does not increase imaging speed

CMOS – 4-pixel binning – 4 readouts

 CCD – 4-pixel binning – 1 readout

 To Crop – use Marquee tool to mark area and then select camera to update number of pixels

**Lasers:** 445nm – 100mW

 488nm – 150mW

 514nm – 150mW

 561nm – 150mW

 637nm – 140mW

**Multi-Pass Excitation Dichroic/Single Emitter Laser Position Emission Filter Wheel**

**c445** 440/514/561 2 – 445nm 4 - 482/35 = 464.5-499.5nm BP

**c488** 405/488/561/640 3 – 488nm 5 - 525/30 = 510.0-540.0nm BP

**c515** 440/514/561 4 – 514nm 6 - 542/27 = 528.5-555.5nm BP

**c561** 405/488/561/640 5 – 561nm 7 - 617/73 = 580.5-653.5nm BP

**c640** 405/488/561/640 6 – 637nm 8 - 692/40 = 672.0-712.0nm BP

**Quad-Pass Ex Dichroic/Quad BP Emitter Laser Position Emission Filter Wheel**

**q488** 405/488/561/640 3 – 488nm 1 – 440/521/607/700

**q561** 405/488/561/640 5 – 561nm 1 – 440/521/607/700

**q640** 405/488/561/640 6 – 637nm 1 – 440/521/607/700

**Triple-Pass Ex Dichroic/Tri BP Emitter Laser Position Emission Filter Wheel**

**t445** 440/514/561 2 – 445nm 2 – 475/543/702

**t515** 440/514/561 4 – 514nm 2 – 475/543/702

**t640** 440/514/561 5 – 561nm 2 – 475/543/702