

# Leica SP8 405-488-561-633

## Laser Confocal

Location: HCI Room 1440

### **Main features of Leica SP8 White Light System:**

- Five detectors, Two Photo Multipliers Tube (PMT) detectors and three HyD detectors for enhanced sensitivity and dynamic range for 5 total fluorescent channels.
- Transmitted light detector available for simultaneous brightfield imaging of samples while scanning confocally.
- Hybrid confocal scan head unit can provide high resolution images up to 4096 x 4096 pixels in size in conventional galvanometer mode and in high speed resonant mode up to 30 frames per second at 512 x 512 pixels.
- Ultra high speed resonant acquisitions up to 420 frames per second at 512 x 32 pixels.
- Fully automated Leica DM8 microscope
- Epifluorescence and DIC (Nomarski) illumination lamps for rapid sample identification and focusing.
- Filter wheel used for epifluorescence viewing of sample is currently outfitted with with DAPI (blue), FITC (green), and TRITC (red), filter cube sets.
- Laser autofocus system provides focal depth consistency across varying sample regions of interest.
- OkoLab heating/cooling stage top incubator with CO<sub>2</sub> and humidity. Plates and dishes with glass bottoms.
- z-galvo

### **Imaging lasers:**

- 405nm diode laser
- 488nm Argon gas laser
- White Light continuously tunable pulsed laser 440-700nm
- 561
- 633

### **Suggested Applications:**

- Multichannel fluorescence and transmitted fixed slide imaging
- Tiling mosaics of fixed or live samples
- Timelapse of dishes or glass bottom well plates

# Objectives:

<b>Objective</b>	<b>Magnification</b>	<b>Immersion</b>	<b>Numerical Aperture</b>	<b>Correction Collar</b>	<b>Coverslip (mm)</b>	<b>Working Distance (mm)</b>
HC PL APO CS2	10	Air	0.4			2.74
HC PL APO CS2	20	Either water, glycerine, or oil	0.75	Corr		0.66
HC PL APO CS2	20	Air	0.75		0.17	0.62
HC PL APO CS2	40	Water	1.1	Corr	0.14-0.18	0.65
HC PL APO CS2	40	Oil	1.3		0.17	0.24
HC PL APO CS2	63	Oil	1.4		0.17	0.14

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Revision #3

Created 20 November 2023 21:39:42 by Bill James

Updated 20 March 2024 19:50:56 by Bill James