

Technical Specifications

- Leica TCS SP8 AOBS confocal laser scanning microscope attached to a Leica DMI8 inverted epifluorescence microscope.
- Conventional scanner and resonant scanner enable a broad range of applications including imaging at up to 25 frames per second with resonant scanner.
- One standard PMT plus two ‘hybrid’ GaAsP detectors, which offer much greater sensitivity, boosting of low signal and photon counting modes.
- Transmitted light detector for brightfield imaging.
- Spectrophotometers allow customised detection of emitted light, spectral scanning etc.
- Equipped with 65 mW Ar laser (458, 476, 488, 496, 514 nm lines), 20 mW solid state yellow laser (561 nm) and 10 mW Red He/Ne (633 nm)
- AOTFs for all laser lines allow rapid attenuation, ROI scanning and localised photo-bleaching.
- AOBS (Acousto-Optical Beam Splitter) automatically adjusts to selectively reflect each excitation line and allows optimisation of detection close to (and overlapping) excitation lines.
- Suitable for a wide range of green, red and far-red fluorophores.
- Environmental chamber (Life Imaging Services) for temperature and CO₂ enrichment. Routinely maintained at 25°C unless other temperature requested on booking.
- Märzhäuser scanning stage – enables multi-position acquisition and tiled imaging.

Filters for visual inspection

	Excitation range	Fluorophore (examples)	Excitation filter	Dichroic mirror	Emission filter
I3	Blue	FITC GFP	BP 450-490	RKP 510	LP 515
N2.1	Green	Rhodamine TRITC	BP 515-560	RKP 580	LP 590
A	UV	DAPI	BP 360/40	RKP 400	LP 425

Lenses

Lens	Dry/Oil	Phase contrast	DIC	Working distance (mm)	Numerical aperture	Features	Serial number	Image size at 0.75x zoom in microns
10x HC PL APO	Dry		No	2.2	0.4		506286	1550
20x HC PL APO CS2	Imm	No	No	0.66	0.75	Coverglass thickness correction	506343	775
40x N PLAN L	Dry		No	1.9 – 3.3	0.55	Coverslip thickness correction	506060	387.5
40x HC PL APO CS2	Oil	No	No	0.24	1.3		506358	387.5
63x HC PL APO CS2	Glycerol	No	No	0.3	1.3	Coverglass thickness correction	506353	246
63x HC PL APO CS2	Oil	No	No	0.14	1.4		506350	246