

Technical Specifications

- Leica SP8 AOBS confocal laser scanning microscope attached to a Leica DM I6000 inverted epifluorescence microscope with ‘Adaptive Focus Control’ to correct focus drift during time-courses.
- Conventional scanner and resonant scanner enable a broad range of applications including imaging at up to 25 frames per second with resonant scanner.
- Three standard PMTs plus two ‘hybrid’ GaAsP detectors, which offer much greater sensitivity, boosting of low signal and photon counting modes.
- Transmitted light detector for brightfield, phase contrast, DIC.
- 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), 2mW Orange HeNe (594 nm), 10 mW Red He/Ne (633 nm) and 50 mW 405 nm diode laser.
- AOTFs for all laser lines allow rapid attenuation, ROI scanning and localised photo-bleaching. Beam expander enhances bleaching for FRAP etc.
- AOBS (Acousto-Optical Beam Splitter) automatically adjusts to selectively reflect each excitation line and allows optimisation of detection close to (and overlapping) excitation lines.
- Notch filters block reflection signal, enabling clearer imaging close to coverslips.
- Suitable for a wide range of blue, green, red and far-red fluorophores.
- Environmental chamber (Life Imaging Services) for temperature and CO₂ enrichment. Routinely maintained at 37°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	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 PL Fluotar	Dry	Yes	Yes	11	0.3		506507	1550
20x HC PL APO CS2	Imm	No	No	0.66	0.75	Coverglass thickness correction	506343	775
40x HC PL APO CS2	Oil	No	Yes	0.24	1.3		506358	387.5
63x HC PL APO CS2	Oil	Yes	Yes	0.14	1.4		506351	246
63x HC PL APO CS2	Glycerol	No	Yes	0.3	1.3	Coverglass thickness correction	506353	246

100x HC PL APO	Oil	No	Yes	0.1	1.4	Coverglass thickness correction	506325	155
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Other lenses available on request

20x HC PL APO	Dry	Yes	Yes	0.59	0.7		506170	775
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