Additional specifications for our scan lenses

performance of the lens as well as plots that

show spot size as a function of scan angle.

80.8 mm

35 µm

±7.5°

are available on our website. The data

includes specifications on the chromatic

Imaging

CHAPTERS V

Laser Scanning
Microscopy
Microscopy
Components
OCT Imaging
Systems

OCT Components

Adaptive Optics

SECTIONS ▼

Light Sources

Balanced Detectors

Interferometers

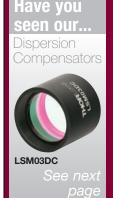
Fiber Components

Polarization Controller

Scanning Mirrors

Optics

Resolution Targets

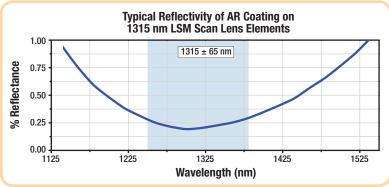


Scan Lenses for OCT Imaging Systems (Page 2 of 2)

Updated

3/28/12

1315 nm Scan Lenses



ITEM # LSM02 LSM04 LSM03 LSM05 Magnification 10X 5X 3X 1.6X Design Wavelength 1315 nm Wavelength Range ±65 nm 18.02 mm Effective Focal Length (EFL) 35.98 mm 53.99 mm 110 mm Lens Working Distance (LWD) 7.5 mm 25.1 mm 42.3 mm 93.7 mm 18.9 mm Scanning Distance (SD) (Distance from Pupil Position to Mounting Plane) 16.1 mm 75.5 mm Pupil Size (1/e²) (EP) 4 mm8 mm Depth of View (DOV) 0.12 mm 0.58 mm 1.15 mm 1.2 mm Field of View (FOV) 4.7 mm x 4.7 mm 9.4 mm x 9.4 mm 14.1 mm x 14.1 mm 28.9 mm x 28.9 mm

30.7 mm

13 µm

50.6 mm

25 μm

Scanning Distance (SD): The SD is the distance between the galvo mirror pivot point and the back mounting plate of the objective. The galvo mirror pivot point must be located at the back focal plane of the objective to maximize image resolution.

Pupil Size (EP): The size of the EP determines the ideal $1/e^2$ collimated beam diameter to maximize the resolution of the imaging system.

Working Distance (WD or LWD): The distance between the tip of the scan lens housing and the front focal plane of the scan lens is defined as the WD.

Depth of View (DOV): The DOV corresponds to the distance between the front focal plane and a parallel plane where the beam spot size has increased by a factor of $\sqrt{2}$.

Field of View (FOV): The FOV is the maximum scan area on the sample that can be imaged with a resolution equal to or better than the stated resolution of the LSM scan lenses.

Parfocal Distance (PD): The PD is the distance from the scan lens mounting plane to the front focal plane of the LSM scan lenses.

Scan Angle (SA): The SA is the maximum allowed angle between the beam and the optical axis of an LSM scan lenses after being reflected off of the galvo mirror.

Scanning Distance Objective Length Working Distance FOV

154.8 mm

23.5 μm

19 µm

850/1050 nm Scan Lenses

Parfocal Distance (PD)

Scan Angle (SA)

Mean Spot Size (S) (1/e2 Beam Diameter in the Field of Focus)

ITEM #	\$	£	€	RMB	DESCRIPTION
LSM02-BB	\$ 1,540.00	£ 1,108.80	€ 1.339,80	¥ 12,273.80	10X OCT Scan Lens, EFL = 18 mm, AR Coating: 800 - 1100 nm
LSM03-BB	\$ 970.00	£ 698.40	€ 843,90	¥ 7,730.90	5X OCT Scan Lens, EFL = 36 mm, AR Coating: 800 – 1100 nm
LSM04-BB	\$ 960.00	£ 691.20	€ 835,20	¥ 7,651.20	3X OCT Scan Lens, EFL = 54 mm, AR Coating: 800 – 1100 nm
LSM05-BB	\$ 960.00	£ 691.20	€ 835,20	¥ 7,651.20	1.6X OCT Scan Lens, EFL = 110 mm, AR Coating: 800 - 1100 nm

1315 nm Scan Lenses

ITEM #	\$	£	€	RMB	DESCRIPTION
LSM02	\$ 1,500.00	£ 1,080.00	€ 1.305,00	¥ 11,955.00	10X OCT Scan Lens, EFL = 18 mm, Design Wavelength = 1315 ± 65 nm
LSM03	\$ 930.00	£ 669.60	€ 809,10	¥ 7,412.10	5X OCT Scan Lens, EFL = 36 mm, Design Wavelength = 1315 ± 65 nm
LSM04	\$ 920.00	£ 662.40	€ 800,40	¥ 7,332.40	3X OCT Scan Lens, EFL = 54 mm, Design Wavelength = 1315 ± 65 nm
LSM05	\$ 920.00	£ 662.40	€ 800,40	¥ 7,332.40	1.6X OCT Scan Lens, EFL = 110 mm, Design Wavelength = 1315 ± 65 nm