

mag.x system 125 optical configurations

Objective Plan Apochromat				Tube lens system												
				1x				1.73x				2.25x				
				f'tub = 250mm				f'tub = 432.5mm				f'tub = 563mm				
				2y' = 25mm				2y' = 43.3mm				2y' = 57mm				
Magn. / NA	WD	f'obj	δ	R0	M	2y	NA'	R'0	M	2y	NA'	R'0	M	2y	NA'	R'0
	mm	mm	μm	lp/mm		mm		lp/mm		mm		lp/mm		mm		lp/mm
2x / 0.08	24.8	125 ± 42.7		293	2	12.5	0.04	147	3.5	12.5	0.023	85	4.5	12.5	0.018	65
5x / 0.2	13	50 ± 6.8		733	5	5	0.04	147	8.7	5	0.023	85	11.25	5	0.018	65
8x / 0.32	23	31.3 ± 2.7		1172	8	3.1	0.04	147	13.8	3.1	0.023	85	18	3.1	0.018	65

NA: Numerical aperture in the object space = $n \cdot \sin(\sigma)$

WD: Working distance

f'obj: Focal length of the objective

f'tub: Focal length of the tube lens

δobj: Depth of field at 546 nm; $\delta_{obj} = \pm n \cdot \lambda / (2 \cdot NA^2)$

R'0: Cut off frequency in image space at 546 nm

R0: Cut off frequency in object space at 546 nm ; $R0 = (2 \cdot NA) / \lambda$

2y': Image field size (maximum detector diagonal)

2y: Object field size

M: Magnification of the overall system; $M = M_{obj} \cdot M_{tub}$

Order number	Description
G192-012-000	Objective lens LD-Plan Apo 5x/0.2
G192-011-000	Objective lens LD-Plan Apo 2x/0.08
4401-552-830-00	Objective lens LD-Plan Apo 8x/0.32
G192-031-000	Tube lens 1x
G192-034-000	Tube lens 1.73x
G192-032-000	Tube lens 2.25x