

# Leitz Objectives and eyepieces

Designation		Cover glass correction <sup>1)</sup>	Eyepiece type	Codeword	Focal length mm.	Free working distance mm.	Total magnifications with Huygens and Periplanatic (or wide field) eyepieces (with tube factor 1.25x)							
System	Magnif./Aperture						6x	8x	10x	12x	15x	16x	20x	25x
Achromatic dry objectives	2.5/0.05	DO	H	OBROS	32.6	20	19	25	31	38	48	50	65	80
	3.5/0.10	DO	H	OANEE	31.6	23	26	35	44	53	66	70	90	110
	6/0.18	DO	H	ACEDU	24.5	17	45	60	75	90	110	120	150	190
	10/0.25	DO	H	ACORA	16.3	5.7	75	100	125	150	190	200	250	315
	13/0.40	DO	H	ACODO	13.3	3.4	98	130	160	195	250	260	325	410
	25/0.50	D	P	ACVIR-FE	7.1	0.88	190	250	310	375	470	500	625	780
	45/0.65	D	HP	ACMAT-FE	4.0	0.60	335	450	560	670	850	900	1125	1400
63/0.85	D I	P	ACISE-FE	2.9	0.29	470	630	785	950	1175	1250	1575	1975	
Achromatic immersions (W=Water)	Oil+ ) 10/0.25	DO	H	OILEX	16.1	0.58	75	100	125	150	190	200	250	315
	W ) 22/0.65	DO	P	OILAT-FE	8.1	0.32	165	220	275	330	415	440	550	690
	W 50/1.00	D	P	WATES-FE	3.6	0.44	375	500	625	750	950	1000	1250	1550
	W 90/1.20	D	P	WATIM-FE	2.1	0.09	675	900	1125	1350	1700	1800	2250	2800
	Oil 100/1.30	D	P	OILIM-FE	1.8	0.14	750	1000	1250	1500	1900	2000	2500	3100
Fluorite dry objectives	FI 40/0.85	D I	P	FLUCA-FE	4.3	0.38	300	400	500	600	750	800	1000	1250
	FI 70/0.90	D I	P	FLUME-FE	2.7	0.22	525	700	875	1050	1300	1400	1750	2200
Fluorite oil immersions	FI Oil 54/0.95	DO	P	FLUIM-FE	3.4	0.22	400	540	675	800	1000	1100	1350	1700
	FI Oil 70/1.30	D	P	FLURI-FE	2.5	0.20	525	700	875	1050	1300	1400	1750	2200
	FI Oil 95/1.32	D	P	FLUES-FE	1.9	0.14	710	950	1200	1425	1800	1900	2400	3000
	FI Oil 114/1.32	D	P	FLUXU-FE	1.6	0.08	850	1150	1425	1700	2100	2300	2850	3550
Apochromatic dry objectives	Apo 12.5/0.30	DO	P	APOSA	13.0	2.5	95	125	150	185	230	250	300	375
	Apo 25/0.65	D	P	APOCT-FE	7.3	0.85	190	250	300	370	460	500	600	750
	Apo 40/0.95	D I <sup>2</sup>	P	OBPAM-FE	4.4	0.12	300	400	500	600	750	800	1000	1250
	Apo 63/0.95	D I <sup>2</sup>	P	OBPEN-FE	3.0	0.12	470	630	785	950	1175	1250	1575	1975
Apochromatic oil immersions	Apo Oil 60/1.32	D	P	APOFO <sup>3</sup>	3.2	0.16	450	600	750	900	1100	1200	1500	1875
	Apo Oil 90/1.32	D	P	APOIM-FE	2.0	0.13	675	900	1125	1350	1700	1800	2250	2800
	Apo Oil 90/1.40	D	P	APOXU-FE	1.9	0.08	675	900	1125	1350	1700	1800	2250	2800
Plano objectives	PI 4/0.10	DO	P	PLAVS	41.5	15	30	40	50	60	75	80	100	125
	PI 10/0.25	DO	P	PLABY	17.9	7.5	75	100	125	150	190	200	250	310
	PI 40/0.65	D	P	PLASP-FE	4.93	0.58	300	400	500	600	750	800	1000	1250
	PI Apo Oil 100/1.32	D	P	PLARN-FE	2.43	0.27	750	1000	1250	1500	1900	2000	2500	3125

Huygens eyepieces				Periplanatic eyepieces				Wide field eyepieces			
Magnification	Field of view mm.	Codeword		Magnification	Field of view mm.	Codeword		Magnification	Field of view mm.	Codeword	
		Single	Pair			Single	Pair			Single	Pair
6x	19	HYZWA	-	P6x	19.5	PERSE	-	GF 10x & 10x B	18	PERIR	PERIS
6x B	17	-	GIZRA	P6x B	18	-	GIRSE	GF 16x & 16x B	15	PEROS	PESOT
10x and 10x B	14	HYVIR	GIVYR	P8x & P8x B	16	PEROT	GIROT	GF 20x & 20x B	12	PERUT	PESUV
16x	10	HYPEE	-	P10x & P10x B	15	PEZEN	GIZEM	GF 25x & 25x B	10	PESAP	PETAR
Micrometer 6x M	17.5	OCMIR- OCASY	-	P12x & P12x B	13	PEZWO	GIZOV	Micrometer GF 25x M	10	PESER	-
High-point <sup>4</sup>				High-point <sup>4</sup>							
6.3x	20	HUFEB	-	P10x	14	PERAN	-				
6.3x B	17	-	HUFIR	P10x B	14	-	PEREP				

For explanatory notes see following page.

### Explanatory notes on the table of objectives (on preceding page)

FE is the supplementary code designation for objectives of medium and high powers incorporating a spring-loaded receding mount as a protection for delicate objective front lenses and cover glasses of specimens in case these are accidentally brought into sudden contact.

Type numbers of objectives are so chosen that the first figure indicates the initial magnification and the second the numerical aperture. A magnification table is supplied with every microscope.

Plano objectives are of longer construction than the standard systems so that the latter when used together with plano objectives on the same nosepiece must be supplemented by the intermediate adapter PLEZY.

<sup>1</sup> D = for use with standard cover glasses 0.17 mm. ( $\pm 0.05$  mm.) thick.

O = without cover glass, DO = equally suitable with or without cover glass.

D: requires strict adherence to cover glass thickness of  $0.17 \pm 0.01$  mm. or use of a correction mount which is variable for cover glasses of from 0.12—0.22 mm.

<sup>2</sup> Objective with automatic focusing compensation doing away with all extra adjustment when the correction mount is set for any unknown cover glass thickness.

<sup>3</sup> Temporarily out of production.

<sup>4</sup> High-point eyepieces enable the wearers of spectacles to use the microscope without the necessity of having to remove their glasses.