

Useable (Evenly Illuminated) Fields of View - Z70 with Mitutoyo Objectives

Z70-FOV-OBJ.XLS

Mitutoyo Objectives	Working Distance	Camera Format/Parameters	1X TUBE Fields of View			1.5X TUBE Fields of View			2X TUBE Fields of View											
5X	32	Magnification at Camera	1.8	-	12.6	2.7	-	19.0	3.6	-	25.3									
		1/4"	1.5	x	2.0	0.21	x	0.28	1.0	x	1.3	0.14	x	0.19	0.75	x	1.0	0.10	x	0.14
		1/3"	1.8	x	2.5	0.28	x	0.38	1.3	x	1.7	0.18	x	0.25	0.99	x	1.3	0.14	x	0.18
		1/2"	2.2	x	3.0	0.38	x	0.50	1.7	x	2.3	0.25	x	0.33	1.3	x	1.7	0.18	x	0.25
		2/3"	2.7	x	3.6	0.52	x	0.69	2.1	x	2.8	0.34	x	0.46	1.7	x	2.2	0.26	x	0.34
			1			5			9											
10X	33	Magnification at Camera	3.6	-	25.3	5.4	-	38.0	7.2	-	50.6									
		1/4"	0.75	x	1.0	0.10	x	0.14	0.50	x	0.67	0.071	x	0.096	0.37	x	0.50	0.053	x	0.072
		1/3"	0.95	x	1.2	0.14	x	0.18	0.66	x	0.88	0.094	x	0.12	0.49	x	0.66	0.071	x	0.094
		1/2"	1.1	x	1.5	0.18	x	0.25	0.86	x	1.1	0.12	x	0.16	0.66	x	0.88	0.094	x	0.12
		2/3"	1.3	x	1.8	0.26	x	0.34	1.0	x	1.4	0.17	x	0.23	0.86	x	1.1	0.13	x	0.17
			2			6			10											
20X	20	Magnification at Camera	7.2	-	50.6	10.9	-	75.9	14.5	-	101.1									
		1/4"	0.37	x	0.49	0.053	x	0.072	0.25	x	0.33	0.035	x	0.048	0.18	x	0.25	0.027	x	0.036
		1/3"	0.45	x	0.61	0.071	x	0.094	0.33	x	0.44	0.047	x	0.063	0.24	x	0.33	0.035	x	0.047
		1/2"	0.55	x	0.73	0.094	x	0.12	0.42	x	0.56	0.063	x	0.084	0.33	x	0.44	0.047	x	0.063
		2/3"	0.68	x	0.91	0.13	x	0.17	0.52	x	0.69	0.086	x	0.11	0.42	x	0.56	0.065	x	0.087
			3			7			11											
50X	13	Magnification at Camera	18.1	-	126.4	27.2	-	189.6	36.2	-	252.8									
		1/4"	0.15	x	0.20	0.021	x	0.028	0.10	x	0.13	0.014	x	0.019	0.075	x	0.10	0.010	x	0.014
		1/3"	0.19	x	0.25	0.028	x	0.038	0.13	x	0.17	0.018	x	0.025	0.099	x	0.13	0.014	x	0.019
		1/2"	0.24	x	0.32	0.037	x	0.050	0.17	x	0.23	0.025	x	0.033	0.13	x	0.17	0.019	x	0.025
		2/3"	0.31	x	0.41	0.052	x	0.069	0.22	x	0.30	0.034	x	0.046	0.17	x	0.23	0.026	x	0.034
			4			8			12											

Minimum Zoom setting for even illumination (50%):

10/31/2000

1 = 1.0 for 1/4" format
 = 1.4 for 1/3" format
 = 2.0 for 1/2" format
 = 2.8 for 2/3" format

5

= 1.0 for 1/4" format
 = 1.0 for 1/3" format
 = 1.15 for 1/2" format
 = 1.75 for 2/3" format

9

= 1.0 for 1/4" format
 = 1.0 for 1/3" format
 = 1.0 for 1/2" format
 = 1.4 for 2/3" format

2 = 1.0 for 1/4" format
 = 1.3 for 1/3" format
 = 1.9 for 1/2" format
 = 2.75 for 2/3" format

6

= 1.0 for 1/4" format
 = 1.0 for 1/3" format
 = 1.15 for 1/2" format
 = 1.75 for 2/3" format

10

= 1.0 for 1/4" format
 = 1.0 for 1/3" format
 = 1.0 for 1/2" format
 = 1.35 for 2/3" format

3 = 1.1 for 1/4" format
 = 1.55 for 1/3" format
 = 2.15 for 1/2" format
 = 2.75 for 2/3" format

7

= 1.0 for 1/4" format
 = 1.0 for 1/3" format
 = 1.35 for 1/2" format
 = 2.0 for 2/3" format

11

= 1.0 for 1/4" format
 = 1.0 for 1/3" format
 = 1.0 for 1/2" format
 = 1.5 for 2/3" format

4 = 1.0 for 1/4" format
 = 1.25 for 1/3" format
 = 1.6 for 1/2" format
 = 2.0 for 2/3" format

8

= 1.0 for 1/4" format
 = 1.0 for 1/3" format
 = 1.15 for 1/2" format
 = 1.45 for 2/3" format

12

= 1.0 for 1/4" format
 = 1.0 for 1/3" format
 = 1.0 for 1/2" format
 = 1.2 for 2/3" format