

Useable (Evenly Illuminated) Fields of View - Z160 with Mitutoyo Objectives

Z160-FOV-OBJ.XLS

Mitutoyo Objectives	Working Distance	Camera Format/Parameters	1X TUBE Fields of View	2X TUBE Fields of View
5X	32	Magnification at Camera	1.2 - 19	2.4 - 37.9
		1/4"	1.9 x 2.5 0.14 x 0.19	1.1 x 1.5 0.072 x 0.096
		1/3"	1.5 x 2.0 0.18 x 0.25	1.5 x 2.0 0.094 x 0.12
		1/2"	0.80 x 1.0 0.25 x 0.33	1.3 x 1.8 0.12 x 0.16
		2/3"	0.69 x 0.92 0.34 x 0.46	1.1 x 1.4 0.17 x 0.23
			1	5
10X	33	Magnification at Camera	2.4 - 37.9	4.7 - 75.7
		1/4"	0.96 x 1.2 0.072 x 0.096	0.57 x 0.77 0.036 x 0.048
		1/3"	0.75 x 1.0 0.094 x 0.12	0.76 x 1.0 0.047 x 0.063
		1/2"	0.40 x 0.54 0.12 x 0.16	0.67 x 0.90 0.063 x 0.084
		2/3"	0.34 x 0.46 0.17 x 0.23	0.55 x 0.74 0.087 x 0.11
			2	6
20X	20	Magnification at Camera	4.7 - 75.7	9.5 - 151.5
		1/4"	0.28 x 0.38 0.036 x 0.048	0.28 x 0.38 0.018 x 0.024
		1/3"	0.25 x 0.33 0.047 x 0.063	0.38 x 0.50 0.023 x 0.031
		1/2"	0.15 x 0.21 0.063 x 0.084	0.18 x 0.24 0.031 x 0.042
		2/3"	0.15 x 0.20 0.087 x 0.11	0.018 x 0.24 0.043 x 0.058
			3	7
50X	13	Magnification at Camera	11.8 - 189.3	23.7 - 378.6
		1/4"	0.065 x 0.088 0.014 x 0.019	0.096 x 0.12 0.0072 x 0.0096
		1/3"	0.060 x 0.081 0.019 x 0.025	0.076 x 0.10 0.095 x 0.012
		1/2"	0.047 x 0.063 0.025 x 0.033	0.048 x 0.064 0.012 x 0.016
		2/3"	0.050 x 0.067 0.034 x 0.046	0.049 x 0.66 0.017 x 0.023
			4	8

Minimum Zoom setting for even illumination:

1 = 0.6 for 1/4" format
 = 1.0 for 1/3" format
 = 2.5 for 1/2" format
 = 4.0 for 2/3" format

2 = 0.6 for 1/4" format
 = 1.0 for 1/3" format
 = 2.5 for 1/2" format
 = 4.0 for 2/3" format

3 = 1.0 for 1/4" format
 = 1.5 for 1/3" format
 = 3.25 for 1/2" format
 = 4.5 for 2/3" format

4 = 1.75 for 1/4" format
 = 2.5 for 1/3" format
 = 4.25 for 1/2" format
 = 5.5 for 2/3" format

5 = 0.5 for 1/4" format
 = 0.5 for 1/3" format
 = 0.75 for 1/2" format
 = 1.25 for 2/3" format

6 = 0.5 for 1/4" format
 = 0.5 for 1/3" format
 = 0.75 for 1/2" format
 = 1.25 for 2/3" format

7 = 0.5 for 1/4" format
 = 0.5 for 1/3" format
 = 1.4 for 1/2" format
 = 1.9 for 2/3" format

8 = 0.6 for 1/4" format
 = 1.0 for 1/3" format
 = 2.1 for 1/2" format
 = 2.8 for 2/3" format

3/1/1999