MM - Measuring Microscope

Total Magnification = Optical Magnification x Digital Magnification

Optical Magnification = Objective Magnification x C-Mount Adapter Magnification

Digital Magnification = Screen Size(Digonal of the **monitor** in mm) / Sensor Size(Digonal of the **camera** in mm)

Optical Magnification

Digital Magnification

Objective	C-mount	Monitor	Camera	Total
0.7	0.5	609.6	4.0	53.3
1.0	0.5	609.6	4.0	76.2
1.5	0.5	609.6	4.0	114.3
2.0	0.5	609.6	4.0	152.4
2.5	0.5	609.6	4.0	190.5

※ ex1) **Camera Size(1/4")** = SQRT(2.4^2)+(3.2^2)

※ ex2) **Monitor Size(24")** = 24×25.4mm

	Monitor Size						
Sensor	**9"**	**13"**	**15"**	**17"**	**19"**	**23"**	**27"**
1/4"	57.2	82.6	95.25	107.95	120.65	146.05	171.5
1/3"	38.1	55.0	63.5	72.0	80.43	97.37	114.3
1/2"	28.6	41.3	47.6	54.0	60.33	73.03	85.7
2/3"	20.8	30.0	34.6	39.3	43.87	53.11	62.3

※ VIDEO Magnification = Monitor diagonal length / CCD diagonal length

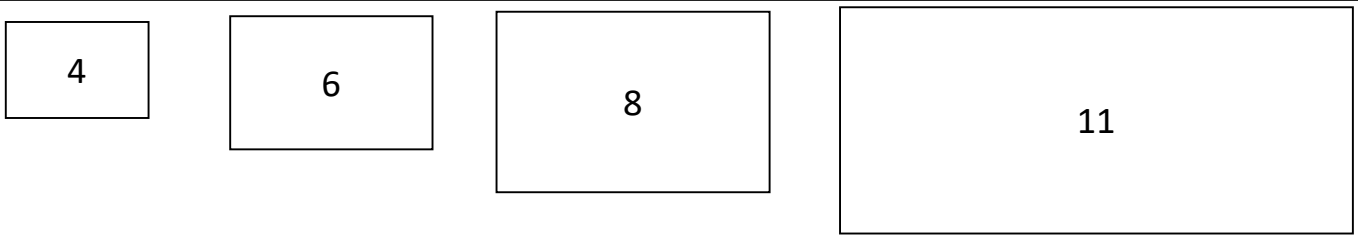
Camera Size(diagonal) Calculation

1/4" = SQRT(2.4^2)+(3.2^2) = 4.0

1/3" = SQRT(3.6^2)+(4.8^2) = 6.0

1/2" = SQRT(4.8^2)+(6.4^2) = 8.0

2/3" = SQRT(6.6^2)+(8.8^2) = 11.0



ex) Maximum magnification??

Objective Magnification = 4.5×

C-Mount Adapter Magnification = 50×

CCD Camera = 1/4"

Monitor = 27"

→ **(4.5×50×685.8) / 4.0 = 38,576.3×**

C-Mount Adapter

: The Nikon C-DA C-Mount Camera Adapter 1x is a C-Mount Adapter used to couple a digital camera to the intermediate tube of a Nikon microscope so the camera can properly capture the image projected from the microscope

IM - Industrial Microscope

IM - Stereo Microscope