

## FACTS & INFORMATION

### Optical Magnification and Digital Magnification

#### Binocular Microscope Magnification:

Mag. = Objective Mag. x Auxiliary Lens Mag. x Eyepiece Mag.

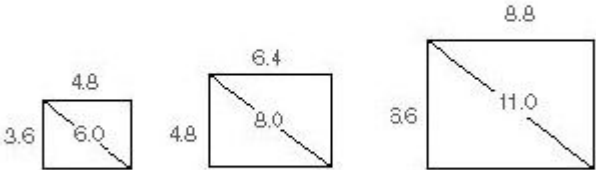
#### Trinocular Microscope Magnification:

Optical Mag. = Objective Mag. x Auxiliary Lens Mag. x Video Coupler Mag.

Digital Mag. = Monitor Diagonal (mm) / CCD Sensor Diagonal (mm)

#### TOTAL MAGNIFICATION

**Total Mag. = Objective's Mag. x Auxiliary's Mag. x Video Coupler x  $\frac{\text{Monitor's Diagonal}}{\text{CCD Sensor's Diagonal}}$**

Monitor	Monitor Size (Diagonal)	CCD Sensor Size
9 inch	230mm	<p style="text-align: center;"><b>CCD Camera Sensor Format</b> Unit: mm</p>  <p style="text-align: center;">1/3 inch      1/2 inch      2/3 inch</p>
12 inch	300mm	
13 inch	330mm	
18 inch	490mm	
20 inch	510mm	
21 inch	540mm	
25 inch	640mm	
27 inch	690mm	
29 inch	740mm	

\*To convert from inch to mm multiply by 25.4

Electronic Magnification Table					
Video Monitor Screen Size ( Diagonal )					
9"	12"	13"	19"	20"	27"
57.2X	76.2X	82.6X	120.7X	127X	171.5X
38.1X	50.8X	55.0X	80.4X	84.7X	114.3X
28.6X	38.1X	41.3X	60.3X	63.5X	85.7X
20.8X	27.7X	30.0X	43.9X	46.2X	62.3X
Total On-Screen Magnification = Optical Magnification x Electronic Magnification					

## FACTS & INFORMATION

### Image Sensor Sizes

In the table shown below, the "Type" refers to the commonly used type designation for sensors, "Aspect Ratio" refers to the ratio of width to height, "Dia." refers to the diameter of the tube size (this is simply the Type converted to millimeters), "Diagonal / Width / Height" are the dimensions of the sensors image producing area.

Image Sensor Facts			Sensor (mm)		
Type	Aspect Ratio	Dia. (mm)	Diagonal	Width	Height
1/3.6"	4:3	7.056	5.000	4.000	3.000
1/3.2"	4:3	7.938	5.680	4.536	3.416
1/3"	4:3	8.467	6.000	4.800	3.600
1/2.7"	4:3	9.407	6.721	5.371	4.035
1/2.5"	4:3	10.160	7.182	5.760	4.290
1/2"	4:3	12.700	8.000	6.400	4.800
1/1.8"	4:3	14.111	8.933	7.176	5.319
1/1.7"	4:3	14.941	9.500	7.600	5.700
2/3"	4:3	16.933	11.000	8.800	6.600
1"	4:3	25.400	16.000	12.800	9.600
4/3"	4:3	33.867	22.500	18.000	13.500
1.8"	3:2	45.720	28.400	23.700	15.700
35 mm film	3:2	n/a	43.300	36.000	24.000

### For More Information

For more information on our products and services, kindly send an E-mail to [sales@pinnacletech.biz](mailto:sales@pinnacletech.biz)

Tel: +(65) 6364 0626 Fax: +(65) 6894 9646