

## Common Digital Camera Sensor Types and Sizes

Sensor Type	Aspect Ratio	Width &	Height (in millimeters)
1/3.6"	4:3	4.000	3.000
1/3.2"	4:3	4.536	3.416
1/3"	4:3	4.800	3.600
1/2.7"	4:3	5.270	3.960
1/2.5"	4:3	5.760	4.290
1/2"	4:3	6.400	4.800
1/1.8"	4:3	7.176	5.319
2/3"	4:3	8.800	6.600
1"	4:3	12.800	9.600
4/3"	4:3	18.000	13.500
APS-C	3:2	25.100	16.700
35 mm	3:2	36.000	24.000
645	4:3	56.000	41.500

\*\*\*\*\*

Below is a list of a few digital cameras (as examples) and their Sensor Size (WIDTH AND HEIGHT in mm).

Camera Sensor Type	Sensor size
Canon PowerShot A100 1/3.2"	4.5 x 3.4 mm
Canon PowerShot A200 1/3.2"	4.5 x 3.4 mm
Casio QV-8000SX 1/3"	4.8 x 3.6 mm
Minolta DiMAGE X 1/2.7"	5.3 x 4.0 mm
Minolta DiMAGE Xi 1/2.7"	5.3 x 4.0 mm
Nikon Coolpix 950 1/2"	6.4 x 4.8 mm
Nikon Coolpix 995 1/1.8"	7.2 x 5.3 mm
Nikon Coolpix 4500 1/1.8"	7.2 x 5.3 mm
Olympus C-5050 Zoom 1/1.8"	7.2 x 5.3 mm
Sony DSC-F717 2/3"	8.8 x 6.6 mm
Minolta DiMAGE 7Hi 2/3"	8.8 x 6.6 mm

Canon EOS-D30	22.7 x 15.1 mm
Nikon D1	23.7 x 15.6 mm
Nikon D100	23.7 x 15.6 mm
Canon EOS-1Ds CMOS	36 x 24 mm
Kodak DSC-14n CMOS	36 x 24 mm

Sourced from [www.dpreview.com](http://www.dpreview.com)

\*\*\*\*\*

**Question:** So how do I use this information to **setup the Pixel Size** for use in iWitness before the camera calibration?

**Answer** (our example uses a **Kodak DCS SLR/n** with CMOS):

i) The image resolution the User has selected for the images are **4500 x 3000** pixels

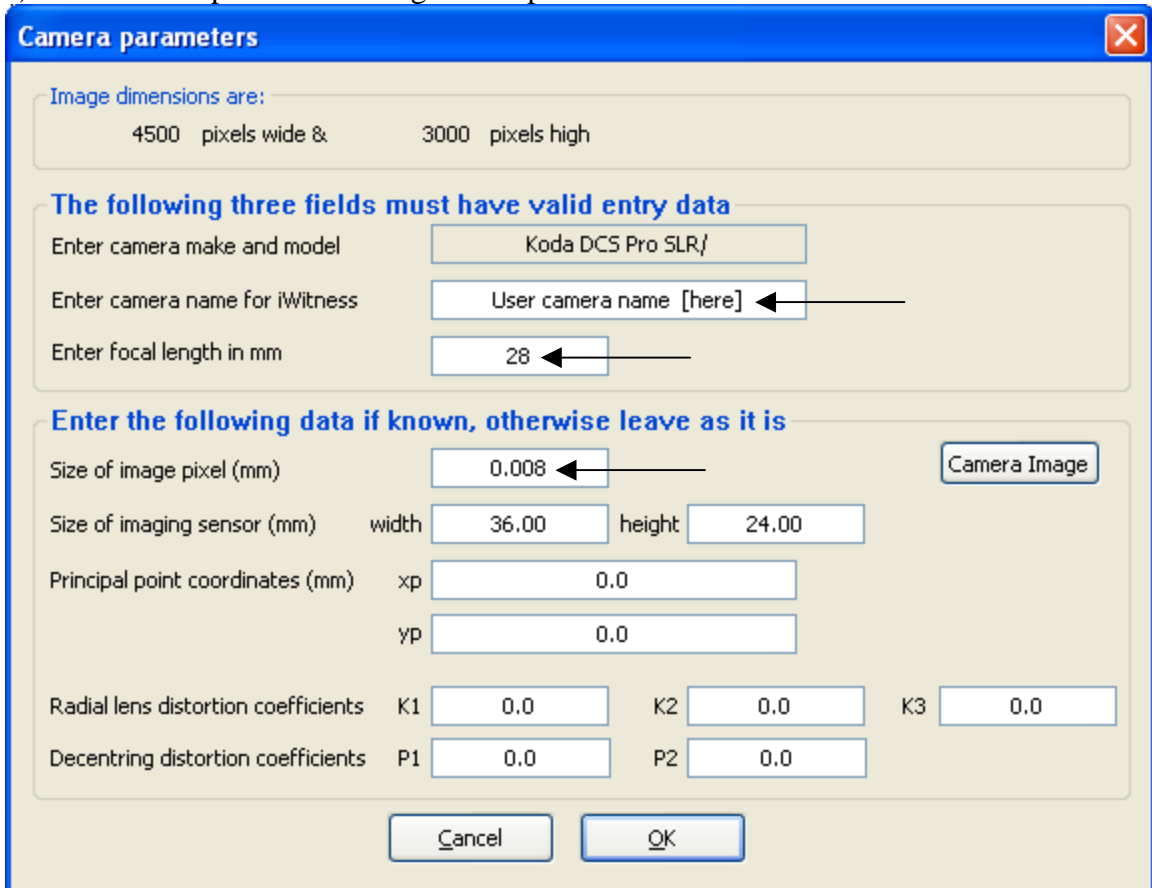
- ii) The Pixel size (*sourced from www.dpreview.com*) is 36mm x 24mm
- iii) Therefore, divide 36 / 4500 and the Sensor Size is determined as .008. Note the ratio is identical for dividing 24 / 3000, as .008.
- iv) User enters the .008 in the “size of image pixel” field in the camera parameters dialog box, along with the focal length and the camera is now ready to calibrate.

**Below is an example of steps the User might encounter:**

- a) Calibration images are imported into iWitness and the cameras is not in the Global database.
- b) The below dialog box is presented, and the User would click “OK”.



- c) The camera parameter dialog is now presented.



- d) With the *Camera parameters* dialog complete, (above noted fields), the camera is now ready for calibration.
- e) The iWitness **Local Camera Database** is automatically updated with the new camera name and cameras parameters.