

# ANGLE OF VIEW VS FOCAL LENGTH

Camera Format:	1/4"	1/3"	3/8"	1/2"	2/3"	1"	35 Full	35 Academy	35 Widescreen
IMAGE SIZE: height (mm):	2.7	3.6	4.1	4.8	6.6	9.6	18.7	16.0	11.9
width (mm):	3.6	4.8	5.0	6.4	8.8	12.8	24.9	22.0	22.0
Angle of view (deg)	Focal length (mm)								
1.0	206	275	286	367	504	733	1427	1261	1261
1.4	144	192	200	256	353	513	998	881	881
2.0	103	138	143	183	252	367	713	630	630
2.9	2X 72	1.6X 96	2X 100	128	176	256	497	439	439
3.0	69	92	95	122	168	244	475	420	420
4.0	52	69	72	92	126	183	357	315	315
5.0	41	55	57	73	101	147	285	252	252
6.0	34	46	48	61	84	122	238	210	210
7.0	29	39	41	52	72	105	204	180	180
8.0	26	34	36	46	63	92	178	157	157
9.0	23	30	32	41	56	81	158	140	140
10	21	27	29	37	50	73	142	126	126
15	14	18	19	24	33	49	95	84	84
20	10	14	14	18	25	36	71	62	62
25	8	11	11	14	20	29	56	50	50
30	6.7	9.0	9.3	11.9	16.4	23.9	46	41	41
35	5.7	7.6	7.9	10.1	14.0	20.3	39	35	35
40	4.9	6.6	6.9	8.8	12.1	17.6	34	30	30
45	4.3	5.8	6.0	7.7	10.6	15.5	30	27	27
50	3.9	5.1	5.4	6.9	9.4	13.7	27	24	24
53	3.6	4.8	5.0	6.4	8.8	12.8	25	22	22
55	3.5	4.6	4.8	6.1	8.5	12.3	24	21	21
60	3.1	4.2	4.3	5.5	7.6	11.1	22	19	19
64	0.5X 2.9	3.8	4.0	5.1	7.0	10.2	20	18	18
71	2.5	3.4	3.5	4.5	6.2	9.0	17	15	15
75	2.3	3.1	3.3	4.2	5.7	8.3	16	14	14
80	2.1	2.9	3.0	3.8	5.2	7.6	15	13	13
85	2.0	2.6	2.7	3.5	4.8	7.0	14	12	12
90	1.8	2.4	2.4	3.2	4.4	6.4	12	11	11
110	1.3	1.7	1.8	2.2	3.1	4.5	9	8	8
114	0.3X 1.2	1.6	1.6	2.1	2.9	4.2	8	7	7
120	1.0	1.4	1.4	1.8	2.5	3.7	7	6	6

PD100 PD150  
HVR-Z1U

KH20x6.4KRS

NORMAL LENS: Same as human eye  
TANDARD LENS: Equals diagonal of image size

$$\text{Angle of view} = 2 \cdot \arctan(\text{image width} / 2 \cdot \text{focal length})$$