GY-HD100 shooting angle calculation table

	Image size of GY-HD100			Angle of GY-HD100			Calculated focal length		
Focal length (mm)	Horizontal length (mm)	Vertical length (mm)	Diagonal length (mm)	Horizontal angle (degree)	Vertical angle (degree)	Diagonal angle (degree)	Focal length with 1/2" lens(mm)	Focal length with 2/3" lens(mm)	Focal length calculated to be equivalent to 35mm film (mm)
3	4.864	2.739	5.582	78.1	49.1	85.9	4.3	5.9	23.3
4	4.864	2.739	5.582	62.6	37.8	69.8	5.7	7.9	31.0
5	4.864	2.739	5.582	51.9	30.6	58.3	7.2	9.9	38.8
6	4.864	2.739	5.582	44.1	25.7	49.9	8.6	11.8	46.5
7	4.864	2.739	5.582	38.3	22.1	43.5	10.0	13.8	54.3
8	4.864	2.739	5.582	33.8	19.4	38.5	11.5	15.8	62.0
9	4.864	2.739	5.582	30.2	17.3	34.5	12.9	17.7	69.8
10	4.864	2.739	5.582	27.3	15.6	31.2	14.3	19.7	77.5
11	4.864	2.739	5.582	24.9	14.2	28.5	15.8	21.7	85.3
12	4.864	2.739	5.582	22.9	13.0	26.2	17.2	23.6	93.0
13	4.864	2.739	5.582	21.2	12.0	24.2	18.6	25.6	100.8
14	4.864	2.739	5.582	19.7	11.2	22.5	20.1	27.6	108.5
15	4.864	2.739	5.582	18.4	10.4	21.1	21.5	29.6	116.3
16	4.864	2.739	5.582	17.3	9.8	19.8	22.9	31.5	124.0
17	4.864	2.739	5.582	16.3	9.2	18.6	24.4	33.5	131.8
18	4.864	2.739	5.582	15.4	8.7	17.6	25.8	35.5	139.5
19	4.864	2.739	5.582	14.6	8.2	16.7	27.2	37.4	147.3
20	4.864	2.739	5.582	13.9	7.8	15.9	28.7	39.4	155.0
21	4.864	2.739	5.582	13.2	7.5	15.1	30.1	41.4	162.8
22	4.864	2.739	5.582	12.6	7.1	14.5	31.5	43.4	170.5
23	4.864	2.739	5.582	12.1	6.8	13.8	33.0	45.3	178.3
24	4.864	2.739	5.582	11.6	6.5	13.3	34.4	47.3	186.0
25	4.864	2.739	5.582	11.1	6.3	12.7	35.8	49.3	193.8
26	4.864	2.739	5.582	10.7	6.0	12.3	37.3	51.2	201.5
27	4.864	2.739	5.582	10.3	5.8	11.8	38.7	53.2	209.3
28	4.864	2.739	5.582	9.9	5.6	11.4	40.1	55.2	217.0
29	4.864	2.739	5.582	9.6	5.4	11.0	41.6	57.1	224.8
30	4.864	2.739	5.582	9.3	5.2	10.6	43.0	59.1	232.6
31	4.864	2.739	5.582	9.0	5.1	10.3	44.4	61.1	240.3
32	4.864	2.739	5.582	8.7	4.9	10.0	45.9	63.1	248.1
33	4.864	2.739	5.582	8.4	4.8	9.7	47.3	65.0	255.8
34	4.864	2.739	5.582	8.2	4.6	9.4	48.7	67.0	263.6
35	4.864	2.739	5.582	7.9	4.5	9.1	50.2	69.0	271.3
36	4.864	2.739	5.582	7.7	4.4	8.9	51.6	70.9	279.1
37	4.864	2.739	5.582	7.5	4.2	8.6	53.0	72.9	286.8
38	4.864	2.739	5.582	7.3	4.1	8.4	54.5	74.9	294.6
39	4.864	2.739	5.582	7.1	4.0	8.2	55.9	76.9	302.3
40	4.864	2.739	5.582	7.0	3.9	8.0	57.3	78.8	310.1
41	4.864	2.739	5.582	6.8	3.8	7.8	58.8	80.8	317.8
42	4.864	2.739	5.582	6.6	3.7	7.6	60.2	82.8	325.6
43	4.864	2.739	5.582	6.5	3.6	7.4	61.6	84.7	333.3
44	4.864	2.739	5.582	6.3	3.6	7.3	63.1	86.7	341.1
45	4.864	2.739	5.582	6.2	3.5	7.1	64.5	88.7	348.8
46	4.864	2.739	5.582	6.1	3.4	6.9	65.9	90.6	356.6
47	4.864	2.739	5.582	5.9	3.3	6.8	67.4	92.6	364.3
48	4.864	2.739	5.582	5.8	3.3	6.7	68.8	94.6	372.1
49	4.864	2.739	5.582	5.7	3.2	6.5	70.2	96.6	379.8
50	4.864	2.739	5.582	5.6	3.1	6.4	71.7	98.5	387.6
51	4.864	2.739	5.582	5.5	3.1	6.3	73.1	100.5	395.3
52	4.864	2.739	5.582	5.4	3.0	6.1	74.5	102.5	403.1
53	4.864	2.739	5.582	5.3	3.0	6.0	76.0	104.4	410.8
54	4.864	2.739	5.582	5.2	2.9	5.9	77.4	106.4	418.6
55	4.864	2.739	5.582	5.1	2.9	5.8	78.8	108.4	426.3
56	4.864	2.739	5.582	5.0	2.8	5.7	80.3	110.4	434.1
57	4.864	2.739	5.582	4.9	2.8	5.6	81.7	112.3	441.8
58	4.864	2.739	5.582	4.8	2.7	5.5	83.1	114.3	449.6
59	4.864	2.739	5.582	4.7	2.7	5.4	84.6	116.3	457.4
60	4.864	2.739	5.582	4.6	2.6	5.3	86.0	118.2	465.1
61	4.864	2.739	5.582	4.6	2.6	5.2	87.4	120.2	472.9
62	4.864	2.739	5.582	4.5	2.5	5.2	88.9	122.2	480.6
63	4.864	2.739	5.582	4.4	2.5	5.1	90.3	124.1	488.4
64	4.864	2.739	5.582	4.4	2.5	5.0	91.7	126.1	496.1
65	4.864	2.739	5.582	4.3	2.4	4.9	93.2	128.1	503.9
66	4.864	2.739	5.582	4.2	2.4	4.8	94.6	130.1	511.6
67	4.864	2.739	5.582	4.2	2.3	4.8	96.0	132.0	519.4
68	4.864	2.739	5.582	4.1	2.3	4.7	97.5	134.0	527.1
69	4.864	2.739	5.582	4.0	2.3	4.6	98.9	136.0	534.9
70	4.864	2.739	5.582	4.0	2.2	4.6	100.3	137.9	542.6
71	4.864	2.739	5.582	3.9	2.2	4.5	101.8	139.9	550.4
72	4.864	2.739	5.582	3.9	2.2	4.4	103.2	141.9	558.1
73	4.864	2.739	5.582	3.8	2.1	4.4	104.6	143.9	565.9
74	4.864	2.739	5.582	3.8	2.1	4.3	106.1	145.8	573.6
75	4.864	2.739	5.582	3.7	2.1	4.3	107.5	147.8	581.4
76	4.864	2.739	5.582	3.7	2.1	4.2	108.9	149.8	589.1
77	4.864	2.739	5.582	3.6	2.0	4.2	110.4	151.7	596.9
78	4.864	2.739	5.582	3.6	2.0	4.1	111.8	153.7	604.6
79	4.864	2.739	5.582	3.5	2.0	4.0	113.2	155.7	612.4
80	4.864	2.739	5.582	3.5	2.0	4.0	114.7	157.6	620.1
81	4.864	2.739	5.582	3.4	1.9	3.9	116.1	159.6	627.9
82	4.864	2.739	5.582	3.4	1.9	3.9	117.5	161.6	635.6
83	4.864	2.739	5.582	3.4	1.9	3.9	119.0	163.6	643.4
84	4.864	2.739	5.582	3.3	1.9	3.8	120.4	165.5	651.1
85	4.864	2.739	5.582	3.3	1.8	3.8	121.8	167.5	658.9
86	4.864	2.739	5.582	3.2	1.8	3.7	123.3	169.5	666.6
87	4.864	2.739	5.582	3.2	1.8	3.7	124.7	171.4	674.4
88	4.864	2.739	5.582	3.2	1.8	3.6	126.1	173.4	682.1
89	4.864	2.739	5.582	3.1	1.8	3.6	127.6	175.4	689.9
90	4.864	2.739	5.582	3.1	1.7	3.6	129.0	177.4	697.7
91	4.864	2.739	5.582	3.1	1.7	3.5	130.4	179.3	705.4
92	4.864	2.739	5.582	3.0	1.7	3.5	131.9	181.3	713.2
93	4.864	2.739	5.582	3.0	1.7	3.4	133.3	183.3	720.9
94	4.864	2.739	5.582	3.0	1.7	3.4	134.7	185.2	728.7
95	4.864	2.739	5.582	2.9	1.7	3.4	136.2	187.2	736.4
96	4.864	2.739	5.582	2.9	1.6	3.3	137.6	189.2	744.2
97	4.864	2.739	5.582	2.9	1.6	3.3	139.0	191.2	751.9

98	4.864	2.739	5.582	2.8	1.6	3.3	140.5	193.1	759.7
99	4.864	2.739	5.582	2.8	1.6	3.2	141.9	195.1	767.4
100	4.864	2.739	5.582	2.8	1.6	3.2	143.3	197.1	775.2
101	4.864	2.739	5.582	2.8	1.6	3.2	144.8	199.0	782.9
102	4.864	2.739	5.582	2.7	1.5	3.1	146.2	201.0	790.7
103	4.864	2.739	5.582	2.7	1.5	3.1	147.6	203.0	798.4
104	4.864	2.739	5.582	2.7	1.5	3.1	149.1	204.9	806.2
105	4.864	2.739	5.582	2.7	1.5	3.0	150.5	206.9	813.9
106	4.864	2.739	5.582	2.6	1.5	3.0	151.9	208.9	821.7
107	4.864	2.739	5.582	2.6	1.5	3.0	153.4	210.9	829.4
108	4.864	2.739	5.582	2.6	1.5	3.0	154.8	212.8	837.2
109	4.864	2.739	5.582	2.6	1.4	2.9	156.2	214.8	844.9
110	4.864	2.739	5.582	2.5	1.4	2.9	157.6	216.8	852.7
111	4.864	2.739	5.582	2.5	1.4	2.9	159.1	218.7	860.4
112	4.864	2.739	5.582	2.5	1.4	2.9	160.5	220.7	868.2
113	4.864	2.739	5.582	2.5	1.4	2.8	161.9	222.7	875.9
114	4.864	2.739	5.582	2.4	1.4	2.8	163.4	224.7	883.7
115	4.864	2.739	5.582	2.4	1.4	2.8	164.8	226.6	891.4
116	4.864	2.739	5.582	2.4	1.4	2.8	166.2	228.6	899.2
117	4.864	2.739	5.582	2.4	1.3	2.7	167.7	230.6	906.9
118	4.864	2.739	5.582	2.4	1.3	2.7	169.1	232.5	914.7
119	4.864	2.739	5.582	2.3	1.3	2.7	170.5	234.5	922.5
120	4.864	2.739	5.582	2.3	1.3	2.7	172.0	236.5	930.2
121	4.864	2.739	5.582	2.3	1.3	2.6	173.4	238.4	938.0
122	4.864	2.739	5.582	2.3	1.3	2.6	174.8	240.4	945.7
123	4.864	2.739	5.582	2.3	1.3	2.6	176.3	242.4	953.5
124	4.864	2.739	5.582	2.2	1.3	2.6	177.7	244.4	961.2
125	4.864	2.739	5.582	2.2	1.3	2.6	179.1	246.3	969.0
126	4.864	2.739	5.582	2.2	1.2	2.5	180.6	248.3	976.7
127	4.864	2.739	5.582	2.2	1.2	2.5	182.0	250.3	984.5
128	4.864	2.739	5.582	2.2	1.2	2.5	183.4	252.2	992.2
129	4.864	2.739	5.582	2.2	1.2	2.5	184.9	254.2	1000.0
130	4.864	2.739	5.582	2.1	1.2	2.5	186.3	256.2	1007.7
131	4.864	2.739	5.582	2.1	1.2	2.4	187.7	258.2	1015.5
132	4.864	2.739	5.582	2.1	1.2	2.4	189.2	260.1	1023.2
133	4.864	2.739	5.582	2.1	1.2	2.4	190.6	262.1	1031.0
134	4.864	2.739	5.582	2.1	1.2	2.4	192.0	264.1	1038.7
135	4.864	2.739	5.582	2.1	1.2	2.4	193.5	266.0	1046.5
136	4.864	2.739	5.582	2.0	1.2	2.4	194.9	268.0	1054.2
137	4.864	2.739	5.582	2.0	1.1	2.3	196.3	270.0	1062.0
138	4.864	2.739	5.582	2.0	1.1	2.3	197.8	271.9	1069.7
139	4.864	2.739	5.582	2.0	1.1	2.3	199.2	273.9	1077.5
140	4.864	2.739	5.582	2.0	1.1	2.3	200.6	275.9	1085.2
141	4.864	2.739	5.582	2.0	1.1	2.3	202.1	277.9	1093.0
142	4.864	2.739	5.582	2.0	1.1	2.3	203.5	279.8	1100.7
143	4.864	2.739	5.582	1.9	1.1	2.2	204.9	281.8	1108.5
144	4.864	2.739	5.582	1.9	1.1	2.2	206.4	283.8	1116.2
145	4.864	2.739	5.582	1.9	1.1	2.2	207.8	285.7	1124.0
146	4.864	2.739	5.582	1.9	1.1	2.2	209.2	287.7	1131.7
147	4.864	2.739	5.582	1.9	1.1	2.2	210.7	289.7	1139.5
148	4.864	2.739	5.582	1.9	1.1	2.2	212.1	291.7	1147.3
149	4.864	2.739	5.582	1.9	1.1	2.1	213.5	293.6	1155.0
150	4.864	2.739	5.582	1.9	1.0	2.1	215.0	295.6	1162.8
151	4.864	2.739	5.582	1.8	1.0	2.1	216.4	297.6	1170.5
152	4.864	2.739	5.582	1.8	1.0	2.1	217.8	299.5	1178.3
153	4.864	2.739	5.582	1.8	1.0	2.1	219.3	301.5	1186.0
154	4.864	2.739	5.582	1.8	1.0	2.1	220.7	303.5	1193.8
155	4.864	2.739	5.582	1.8	1.0	2.1	222.1	305.4	1201.5
156	4.864	2.739	5.582	1.8	1.0	2.0	223.6	307.4	1209.3
157	4.864	2.739	5.582	1.8	1.0	2.0	225.0	309.4	1217.0
158	4.864	2.739	5.582	1.8	1.0	2.0	226.4	311.4	1224.8
159	4.864	2.739	5.582	1.8	1.0	2.0	227.9	313.3	1232.5
160	4.864	2.739	5.582	1.7	1.0	2.0	229.3	315.3	1240.3
161	4.864	2.739	5.582	1.7	1.0	2.0	230.7	317.3	1248.0
162	4.864	2.739	5.582	1.7	1.0	2.0	232.2	319.2	1255.8
163	4.864	2.739	5.582	1.7	1.0	2.0	233.6	321.2	1263.5
164	4.864	2.739	5.582	1.7	1.0	1.9	235.0	323.2	1271.3
165	4.864	2.739	5.582	1.7	1.0	1.9	236.5	325.2	1279.0
166	4.864	2.739	5.582	1.7	0.9	1.9	237.9	327.1	1286.8
167	4.864	2.739	5.582	1.7	0.9	1.9	239.3	329.1	1294.5
168	4.864	2.739	5.582	1.7	0.9	1.9	240.8	331.1	1302.3
169	4.864	2.739	5.582	1.6	0.9	1.9	242.2	333.0	1310.0
170	4.864	2.739	5.582	1.6	0.9	1.9	243.6	335.0	1317.8
171	4.864	2.739	5.582	1.6	0.9	1.9	245.1	337.0	1325.5
172	4.864	2.739	5.582	1.6	0.9	1.9	246.5	338.9	1333.3
173	4.864	2.739	5.582	1.6	0.9	1.8	247.9	340.9	1341.0
174	4.864	2.739	5.582	1.6	0.9	1.8	249.4	342.9	1348.8
175	4.864	2.739	5.582	1.6	0.9	1.8	250.8	344.9	1356.5
176	4.864	2.739	5.582	1.6	0.9	1.8	252.2	346.8	1364.3
177	4.864	2.739	5.582	1.6	0.9	1.8	253.7	348.8	1372.1
178	4.864	2.739	5.582	1.6	0.9	1.8	255.1	350.8	1379.8
179	4.864	2.739	5.582	1.6	0.9	1.8	256.5	352.7	1387.6
180	4.864	2.739	5.582	1.5	0.9	1.8	258.0	354.7	1395.3
181	4.864	2.739	5.582	1.5	0.9	1.8	259.4	356.7	1403.1
182	4.864	2.739	5.582	1.5	0.9	1.8	260.8	358.7	1410.8
183	4.864	2.739	5.582	1.5	0.9	1.7	262.3	360.6	1418.6
184	4.864	2.739	5.582	1.5	0.9	1.7	263.7	362.6	1426.3
185	4.864	2.739	5.582	1.5	0.8	1.7	265.1	364.6	1434.1
186	4.864	2.739	5.582	1.5	0.8	1.7	266.6	366.5	1441.8
187	4.864	2.739	5.582	1.5	0.8	1.7	268.0	368.5	1449.6
188	4.864	2.739	5.582	1.5	0.8	1.7	269.4	370.5	1457.3
189	4.864	2.739	5.582	1.5	0.8	1.7	270.9	372.4	1465.1
190	4.864	2.739	5.582	1.5	0.8	1.7	272.3	374.4	1472.8
191	4.864	2.739	5.582	1.5	0.8	1.7	273.7	376.4	1480.6
192	4.864	2.739	5.582	1.5	0.8	1.7	275.2	378.4	1488.3
193	4.864	2.739	5.582	1.4	0.8	1.7	276.6	380.3	1496.1
194	4.864	2.739	5.582	1.4	0.8	1.6	278.0	382.3	1503.8
195	4.864	2.739	5.582	1.4	0.8	1.6	279.5	384.3	1511.6

? ? = 2 T a n - 1 (? ? / 2 f)

? ? = 2 L T a n (? ? / 2)