



TC 23 110

0,08x Bi-Telecentric lens for detectors up to 2/3"

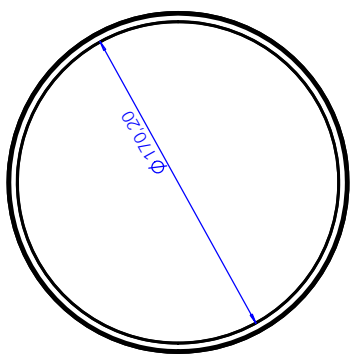
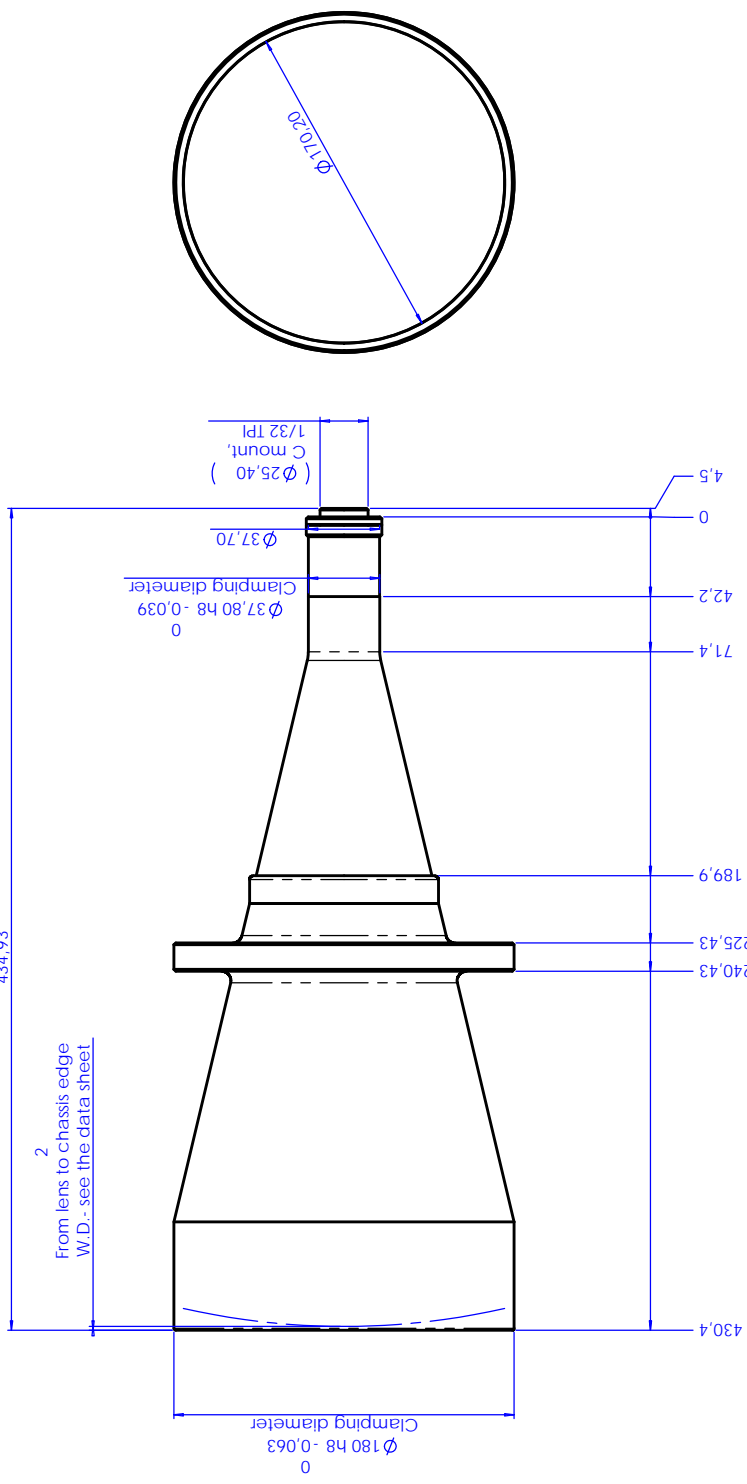


part number		TC 23 110
Magnification		0,079 +/- 3%
Field Of View	(mm x mm)	
with 1/4" (3,6 x 2,7) detector		45,3 x 34,0
with 1/3" (4,8 x 3,6) detector		60,5 x 45,3
with 1/2" (6,4 x 4,8) detector		80,6 x 60,5
with 1/1.8" (7,13 x 5,37) detector		89,8 x 67,6
with 2/3" (8,8 x 6,6) detector		110,8 x 83,1
Working Distance	(mm)	336,5 +/- 10
Working F-number		8
Telecentricity	(degree)	< 0,08
Distortion	(%)	< 0,07
Field Depth	(mm)	106,0
CTF @70 lp/mm	(%)	> 40
Image side N.A.		0,0620
Object side N.A.		0,0049
Mount		C
Length	(mm)	430,3
External diameter	(mm)	180,0
Weight	(g)	5300

ACCESSORIES AND OPTIONS:



Collimated/Telecentric illumination:
Compatible with LTCL120 illuminator;
green light suggested.



Material	N.A.	Mass	5.3 kg	Scale	1:2
Surface treatment	N.A.	Project/Item/Instrument	TC 23 110		
Geometrical tolerances (ISO 2045)	Class	Linear tolerance (ISO 2768)	Class	Formal tolerance (ISO 145)	Description
0.1	>30	0.1	>30	Formal tolerance (ISO 145)	Dimensional Drawing
0.2	12-30	0.2	12-30	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
0.3	6-12	0.3	6-12	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
0.4	3-6	0.4	3-6	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
0.5	1-3	0.5	1-3	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
0.6	0.6-1	0.6	0.6-1	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
0.7	0.3-0.6	0.7	0.3-0.6	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
0.8	0.2-0.3	0.8	0.2-0.3	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
0.9	0.1-0.2	0.9	0.1-0.2	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
1.0	0.05-0.1	1.0	0.05-0.1	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
1.2	0.02-0.05	1.2	0.02-0.05	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
1.4	0.01-0.02	1.4	0.01-0.02	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
1.6	0.005-0.01	1.6	0.005-0.01	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
1.8	0.002-0.005	1.8	0.002-0.005	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
2.0	0.001-0.002	2.0	0.001-0.002	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
2.5	0.0005-0.001	2.5	0.0005-0.001	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
3.0	0.0002-0.0005	3.0	0.0002-0.0005	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
4.0	0.0001-0.0002	4.0	0.0001-0.0002	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
5.0	0.00005-0.0001	5.0	0.00005-0.0001	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
6.0	0.00002-0.00005	6.0	0.00002-0.00005	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
7.0	0.00001-0.00002	7.0	0.00001-0.00002	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
8.0	0.000005-0.00001	8.0	0.000005-0.00001	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
9.0	0.000002-0.000005	9.0	0.000002-0.000005	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
10.0	0.000001-0.000002	10.0	0.000001-0.000002	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
12.5	0.0000005-0.000001	12.5	0.0000005-0.000001	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
15.0	0.0000002-0.0000005	15.0	0.0000002-0.0000005	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
20.0	0.0000001-0.0000002	20.0	0.0000001-0.0000002	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
25.0	0.00000005-0.0000001	25.0	0.00000005-0.0000001	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
30.0	0.00000002-0.00000005	30.0	0.00000002-0.00000005	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
40.0	0.00000001-0.00000002	40.0	0.00000001-0.00000002	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
50.0	0.000000005-0.00000001	50.0	0.000000005-0.00000001	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
63.0	0.000000002-0.000000005	63.0	0.000000002-0.000000005	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
80.0	0.000000001-0.000000002	80.0	0.000000001-0.000000002	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
100.0	0.0000000005-0.000000001	100.0	0.0000000005-0.000000001	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
125.0	0.0000000002-0.0000000005	125.0	0.0000000002-0.0000000005	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
160.0	0.0000000001-0.0000000002	160.0	0.0000000001-0.0000000002	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
200.0	0.00000000005-0.0000000001	200.0	0.00000000005-0.0000000001	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
250.0	0.00000000002-0.00000000005	250.0	0.00000000002-0.00000000005	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
315.0	0.00000000001-0.00000000002	315.0	0.00000000001-0.00000000002	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
400.0	0.000000000005-0.00000000001	400.0	0.000000000005-0.00000000001	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
500.0	0.000000000002-0.000000000005	500.0	0.000000000002-0.000000000005	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
630.0	0.000000000001-0.000000000002	630.0	0.000000000001-0.000000000002	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
800.0	0.0000000000005-0.000000000001	800.0	0.0000000000005-0.000000000001	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
1000.0	0.0000000000002-0.0000000000005	1000.0	0.0000000000002-0.0000000000005	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
1250.0	0.0000000000001-0.0000000000002	1250.0	0.0000000000001-0.0000000000002	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
1600.0	0.00000000000005-0.0000000000001	1600.0	0.00000000000005-0.0000000000001	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
2000.0	0.00000000000002-0.00000000000005	2000.0	0.00000000000002-0.00000000000005	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
2500.0	0.00000000000001-0.00000000000002	2500.0	0.00000000000001-0.00000000000002	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
3150.0	0.000000000000005-0.00000000000001	3150.0	0.000000000000005-0.00000000000001	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
4000.0	0.000000000000002-0.000000000000005	4000.0	0.000000000000002-0.000000000000005	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
5000.0	0.000000000000001-0.000000000000002	5000.0	0.000000000000001-0.000000000000002	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
6300.0	0.0000000000000005-0.000000000000001	6300.0	0.0000000000000005-0.000000000000001	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
8000.0	0.0000000000000002-0.0000000000000005	8000.0	0.0000000000000002-0.0000000000000005	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
10000.0	0.0000000000000001-0.0000000000000002	10000.0	0.0000000000000001-0.0000000000000002	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
12500.0	0.00000000000000005-0.0000000000000001	12500.0	0.00000000000000005-0.0000000000000001	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
16000.0	0.00000000000000002-0.00000000000000005	16000.0	0.00000000000000002-0.00000000000000005	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
20000.0	0.00000000000000001-0.00000000000000002	20000.0	0.00000000000000001-0.00000000000000002	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
25000.0	0.000000000000000005-0.00000000000000001	25000.0	0.000000000000000005-0.00000000000000001	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
31500.0	0.000000000000000002-0.000000000000000005	31500.0	0.000000000000000002-0.000000000000000005	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
40000.0	0.000000000000000001-0.000000000000000002	40000.0	0.000000000000000001-0.000000000000000002	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
50000.0	0.0000000000000000005-0.000000000000000001	50000.0	0.0000000000000000005-0.000000000000000001	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
63000.0	0.0000000000000000002-0.0000000000000000005	63000.0	0.0000000000000000002-0.0000000000000000005	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
80000.0	0.0000000000000000001-0.0000000000000000002	80000.0	0.0000000000000000001-0.0000000000000000002	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
100000.0	0.00000000000000000005-0.0000000000000000001	100000.0	0.00000000000000000005-0.0000000000000000001	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
125000.0	0.00000000000000000002-0.00000000000000000005	125000.0	0.00000000000000000002-0.00000000000000000005	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
160000.0	0.00000000000000000001-0.00000000000000000002	160000.0	0.00000000000000000001-0.00000000000000000002	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
200000.0	0.000000000000000000005-0.00000000000000000001	200000.0	0.000000000000000000005-0.00000000000000000001	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
250000.0	0.000000000000000000002-0.000000000000000000005	250000.0	0.000000000000000000002-0.000000000000000000005	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
315000.0	0.000000000000000000001-0.000000000000000000002	315000.0	0.000000000000000000001-0.000000000000000000002	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
400000.0	0.0000000000000000000005-0.000000000000000000001	400000.0	0.0000000000000000000005-0.000000000000000000001	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
500000.0	0.0000000000000000000002-0.0000000000000000000005	500000.0	0.0000000000000000000002-0.0000000000000000000005	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
630000.0	0.0000000000000000000001-0.0000000000000000000002	630000.0	0.0000000000000000000001-0.0000000000000000000002	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
800000.0	0.00000000000000000000005-0.0000000000000000000001	800000.0	0.00000000000000000000005-0.0000000000000000000001	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
1000000.0	0.00000000000000000000002-0.00000000000000000000005	1000000.0	0.00000000000000000000002-0.00000000000000000000005	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
1250000.0	0.00000000000000000000001-0.00000000000000000000002	1250000.0	0.00000000000000000000001-0.00000000000000000000002	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
1600000.0	0.000000000000000000000005-0.00000000000000000000001	1600000.0	0.000000000000000000000005-0.00000000000000000000001	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
2000000.0	0.000000000000000000000002-0.000000000000000000000005	2000000.0	0.000000000000000000000002-0.000000000000000000000005	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
2500000.0	0.000000000000000000000001-0.000000000000000000000002	2500000.0	0.000000000000000000000001-0.000000000000000000000002	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
3150000.0	0.0000000000000000000000005-0.000000000000000000000001	3150000.0	0.0000000000000000000000005-0.000000000000000000000001	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
4000000.0	0.0000000000000000000000002-0.0000000000000000000000005	4000000.0	0.0000000000000000000000002-0.0000000000000000000000005	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
5000000.0	0.0000000000000000000000001-0.0000000000000000000000002	5000000.0	0.0000000000000000000000001-0.0000000000000000000000002	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
6300000.0	0.00000000000000000000000005-0.0000000000000000000000001	6300000.0	0.00000000000000000000000005-0.0000000000000000000000001	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
8000000.0	0.00000000000000000000000002-0.00000000000000000000000005	8000000.0	0.00000000000000000000000002-0.00000000000000000000000005	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
10000000.0	0.00000000000000000000000001-0.00000000000000000000000002	10000000.0	0.00000000000000000000000001-0.00000000000000000000000002	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
12500000.0	0.000000000000000000000000005-0.00000000000000000000000001	12500000.0	0.000000000000000000000000005-0.00000000000000000000000001	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
16000000.0	0.000000000000000000000000002-0.000000000000000000000000005	16000000.0	0.000000000000000000000000002-0.000000000000000000000000005	Formal tolerance (ISO 145)	Formal tolerance (ISO 145)
20000000.0	0.000000000000000000000000001-				