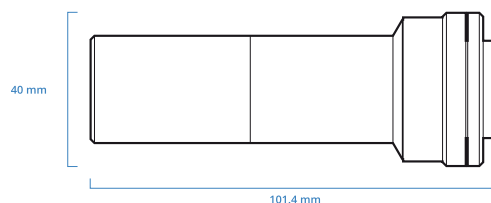


# TC 23 004

Bi-telecentric lens for 2/3" detectors, magnification 2.000 x, C-mount

Magnification	(x)	2.000
Image circle	(mm)	11.0
<b>Object field of view</b>		
with 1/3" detector (4.8 x 3.6 mm)	(mm x mm)	2.40 x 1.80
with 1/2.5" detector (5.70 x 4.28 mm)	(mm x mm)	2.85 x 2.14
with 1/2" detector (6.4 x 4.8 mm)	(mm x mm)	3.20 x 2.40
with 1/1.8" detector (7.13 x 5.37 mm) (7)	(mm x mm)	3.56 x 2.68
with 2/3" - 5 Mpx detector (8.45 x 7.07 mm)	(mm x mm)	4.22 x 3.55
<b>Optical specifications</b>		
Working distance (1)	(mm)	57.1
f/# (2)		11
Telecentricity typical (max) (3)	(deg)	< 0.08 (0.10)
Distortion typical (max) (4)	(%)	< 0.04 (0.08)
Field depth (5)	(mm)	0.23
CTF @ 70 lp/mm	(%)	> 30
<b>Dimensions</b>		
Mount		C
Length (6)	(mm)	101.4
Diameter	(mm)	28
Mass	(g)	148



## NOTES

1. Working Distance: distance between the front lens and the object. Set this distance within +/- 3% of the nominal value for maximum resolution and minimum distortion.
2. Working F-number: the real F-number of a lens when used as a macro. Lenses with smaller apertures can be supplied on request.
3. Maximum slope of chief rays inside the lens: when converted to millirad, it gives the maximum measurement error for any millimeter of object displacement. Typical (average production) values and maximum (guaranteed) values are listed.
4. Percent deviation of the real image compared to an ideal, undistorted image: typical (average production) values and maximum (guaranteed) values are listed.
5. At the borders of the field depth the image can be still used for measurement but, to get a very sharp image, only half of the nominal field depth should be considered. Pixel size used for calculation is 5.5 µm.
6. Measured from the front end of the mechanics to the camera flange.
7. With 1/1.8" (9 mm diagonal) detectors, the FOV of TC12 yyy lenses may show some vignetting at the image corners, as these lenses are optimized for 1/2" detectors (8 mm diagonal).
8. For the fields with the indication "Ø =", the image of a circular object of such diameter is fully inscribed into the detector.

## COMPATIBLE PRODUCTS



LTCLHP023-G  
Telecentric HP illuminator, beam diameter 16 mm, green



CMHO 023  
Clamping mechanics for TCxx004, 007, 009, 012 and LTCL023-X



LTRN 023 NW  
Ring LED illuminator, white