

# TC 23 085

Bi-telecentric lens for 2/3" detectors, magnification 0.104 x, C-mount

## SPECIFICATIONS

Magnification	(x)	0.104
Image circle Ø	(mm)	11.0

### Object field of view (8)

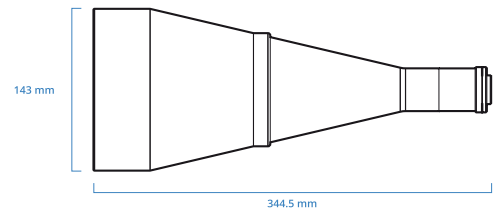
with 1/3" detector (4.8 x 3.6 mm)	(mm x mm)	46.3 x 34.8
with 1/2.5" detector (5.70 x 4.28 mm)	(mm x mm)	55.1 x 41.3
with 1/2" detector (6.4 x 4.8 mm)	(mm x mm)	61.8 x 46.3
with 1/1.8" detector (7.13 x 5.37 mm) (7)	(mm x mm)	68.8 x 51.8
with 2/3" - 5 Mpx detector (8.45 x 7.07 mm)	(mm x mm)	81.5 x 68.2

### Optical specifications

Working distance (1)	(mm)	279.7
f/# (2)		8
Telecentricity typical (max) (3)	(deg)	< 0.04 (0.08)
Distortion typical (max) (4)	(%)	< 0.02 (0.08)
Field depth (5)	(mm)	62
CTF @ 70 lp/mm	(%)	> 45

### Dimensions

Mount		C
Length (6)	(mm)	344.5
Diameter	(mm)	143
Mass	(g)	2500



## NOTES

1. Working Distance: distance between the front end of the mechanics 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



LTCLHP096-G  
Telecentric HP illuminator, beam diameter 120 mm, green



CMHO 096  
Clamping mechanics for TCxx085, TCxx096 lenses and LTCLHP096-X illuminators



LTRN 096 NW  
Ring LED illuminator, white