TC 23 072

Telecentricity typical (max) (3)

Distortion typical (max) (4)

Field depth (5)

Dimensions

CTF @ 70 lp/mm

OPTO ENGINEERING

Bi-telecentric lens for 2/3" detectors, magnification 0.122 x, C-mount

SPECIFICATIONS

Magnification

Image circle Ø	(mm)	11.0
Object field of view (8)		
with 1/3" detector (4.8 x 3.6 mm)	(mm x mm)	39.2 x 29.4
with 1/2.5" detector (5.70 x 4.28 mm)	(mm x mm)	46.6 x 35.0
with 1/2" detector (6.4 x 4.8 mm)	(mm x mm)	52.3 x 39.2
with 1/1.8" detector (7.13 x 5.37 mm) (7)	(mm x mm)	58.3 x 43.9
with 2/3" - 5 Mpx detector (8.45 x 7.07 mm)	(mm x mm)	69.1 x 57.8
Optical specifications		
Working distance (1)	(mm)	226.7
f/# (2)		8

(x)

(deg)

(%)

(mm)

(%)

0.122

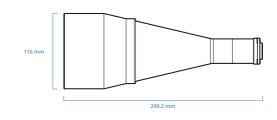
< 0.04 (0.08)

< 0.03 (0.07)

45

> 40









Mount		C
Length (6)	(mm)	299.2
Diameter	(mm)	116
Mass	(g)	1600

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 μ m.
- $\,$ 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



LTCLHP080-G Telecentric HP illuminator, beam diameter 100 mm, green



CMHO 080 Clamping mechanics for TCxx072, TCxx080, LTCLHP080-X illuminators and PCxx030XS



LTRN 080 NW Ring LED illuminator, white