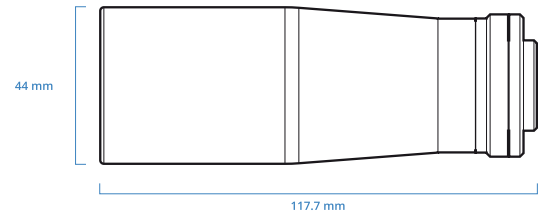


TC12024

Bi-telecentric lens for 1/2" detectors, magnification 0.255 x, C-mount

SPECIFICATIONS

| | | |
|--|-----------|---------------|
| Magnification | (x) | 0.255 |
| Image circle Ø | (mm) | 8.0 |
| Object field of view (8) | | |
| with 1/3" detector (4.8 x 3.6 mm) | (mm x mm) | 18.8 x 14.1 |
| with 1/2.5" detector (5.70 x 4.28 mm) | (mm x mm) | 22.4 x 16.8 |
| with 1/2" detector (6.4 x 4.8 mm) | (mm x mm) | 25.1 x 18.8 |
| with 1/1.8" detector (7.13 x 5.37 mm) (7) | (mm x mm) | 28.0 x 21.1 |
| with 2/3" - 5 MP detector (8.45 x 7.07 mm) | (mm x mm) | Ø = 27.7 |
| Optical specifications | | |
| Working distance (1) | (mm) | 67.2 |
| wF/# (2) | | 8 |
| Telecentricity typical (max) (3) | (deg) | < 0.08 (0.10) |
| Distortion typical (max) (4) | (%) | < 0.04 (0.08) |
| Field depth (5) | (mm) | 10 |
| CTF @ 70 lp/mm | (%) | > 45 |
| Dimensions | | |
| Mount | | C |
| Length (6) | (mm) | 117.8 |
| Diameter | (mm) | 44 |
| Mass | (g) | 370 |



NOTES

- 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.
- Working F-number (wF/#): the real F-number of a lens when used as a macro. Lenses with smaller apertures can be supplied on request.
- 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.
- Percent deviation of the real image compared to an ideal, undistorted image: typical (average production) values and maximum (guaranteed) values are listed.
- 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.
- Measured from the front end of the mechanics to the camera flange.
- With 1/1.8" (9 mm diagonal) detectors, the FOV of TC12yyy lenses may show some vignetting at the image corners, as these lenses are optimized for 1/2" detectors (8 mm diagonal).
- For the fields with the indication "Ø =", the image of a circular object of such diameter is fully inscribed into the detector.

COMPATIBLE PRODUCTS

| | |
|-----------------|--|
| LTCLHP024-G | Telecentric HP illuminator, beam diameter 30 mm, green |
| CMH0024 | Clamping mechanics for TCxx024 lenses and LTCLHP024-X illuminators |
| LTRN024NW | Ring LED illuminator, inner diameter 44 mm, straight type, white |
| Optical filters | Lens filters and mounting accessory |