# TCCR23064

Bi-telecentric CORE lens for 2/3" detectors, magnification 0.138 x, C-mount

## SPECIFICATIONS

| Part number (8) | | TCCR23064 |
|---|---|---|
| Magnification | (x) | 0.138 |
| Image shape dimension (9) | (Ø, x mm) | Ø=11.5, x=9.5 |
| Phase adjustment (7) | | Yes |

### Object field of view (6)

| | | |
|---|---|---|
| with 1/3" detector (4.8 x 3.6 mm) | (mm × mm) | 34.9 x 26.2 |
| with 1/2.5" detector (5.70 x 4.28 mm) | (mm × mm) | 41.5 x 31.1 |
| with 1/2" detector (6.4 x 4.8 mm) | (mm × mm) | 46.6 x 34.9 |
| with 1/1.8" detector (7.13 x 5.37 mm) | (mm × mm) | 51.9 x 39.0 |
| with 2/3" - 5 MP detector (8.45 x 7.07 mm) | (mm × mm) | 61.4 x 51.4 |

### Optical specifications

| | | |
|---|---|---|
| Working distance (1) | (mm) | 181.8 |
| wF/# (2) | | 8 |
| Telecentricity typical (max) (3) | (deg) | < 0.05 (0.08) |
| Distortion typical (max) (4) | (%) | < 0.03 (0.10) |
| Field depth (5) | (mm) | 35 |
| CTF @ 70 lp/mm | (%) | > 50 |

### Dimensions

| | | |
|---|---|---|
| Mount | | C |
| A | (mm) | 101 |
| B | (mm) | 122 |
| C | (mm) | 153 |
| Mass | (g) | 1942 |

### Compatibility

LTCLCR064-x, CMHOCR064, CMPTCR064, LTCLHP064-x
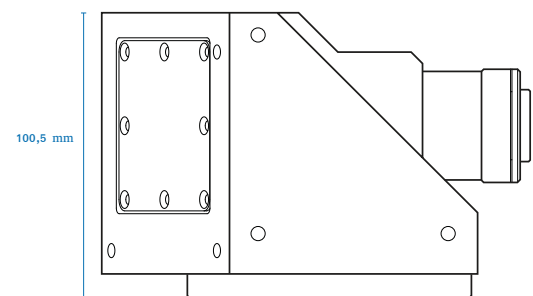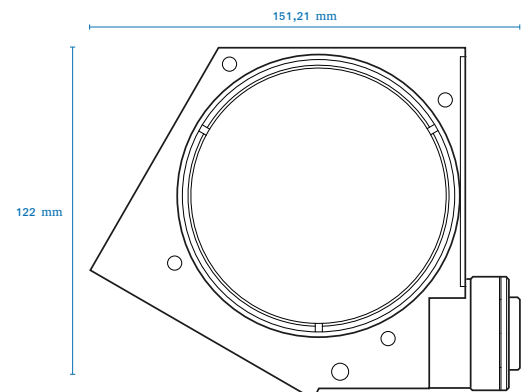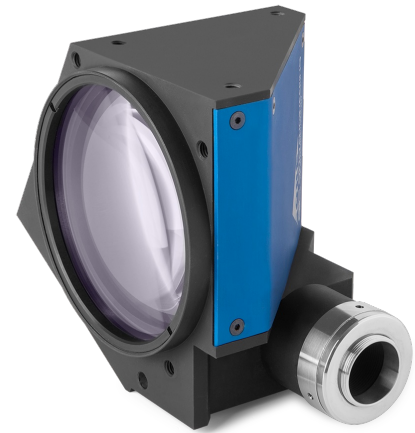


151,21 mm
122 mm
100,5 mm

## 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 (wF/#): 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 perfectly sharp image, only half of the nominal field depth should be considered. Pixel size used for calculation is 5.5 μm.

6. In case the of vignetting, FOV dimensions are indicated with "Ø = , x= ", where "Ø =" stands for diameter and "x=" indicates the nominal FOV height and length (see **Tech Info** for related drawing).

7. Indicates the availability of an integrated camera phase adjustment feature.

8. Due to the special shape of TCCR120xx it might be necessary to check the mechanical compatibility with your camera.

9. Indicates the dimensions and shape of image, where "Ø =" stands for diameter and "x=" indicates the nominal image height and length (**Tech Info** for related drawing).

## COMPATIBLE PRODUCTS



| | |
|---|---|
| **LTCLHP064-R** | Telecentric HP illuminator, beam diameter 80 mm, red |
| **LTCLHP064-G** | Telecentric HP illuminator, beam diameter 80 mm, green |

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|---|---|
| **LTCLHP064-B** | Telecentric HP illuminator, beam diameter 80 mm, blue |
| **LTCLHP064-W** | Telecentric HP illuminator, beam diameter 80 mm, white |



| | |
|---|---|
| **LTCLCR064-R** | Telecentric CORE illuminator, beam dimensions Ø = 86; x = 67, red |
| **LTCLCR064-G** | Telecentric CORE illuminator, beam dimensions Ø = 86; x = 67, green |
| **LTCLCR064-W** | Telecentric CORE illuminator, beam dimensions Ø = 86; x = 67, white |



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|---|---|
| **CMHOCR064** | Clamping mechanics for CORE telecentric lenses and illuminators TCCRxx64 and LTCLCR064-x |



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|---|---|
| **CMPTCR064** | Mechanical components designed for CORE telecentric lenses and illuminators Ø 64mm |