

TCCR23048

Bi-telecentric CORE lens for 2/3" detectors, magnification 0.184 x, C-mount

SPECIFICATIONS

Part number (8)		TCCR23048
Magnification	(x)	0.184
Image shape dimension (9)	(Ø, x mm)	Ø=11.0, x=9.6
Phase adjustment (7)		Yes

Object field of view (6)

with 1/3" detector (4.8 x 3.6 mm)	(mm × mm)	26.1 x 19.6
with 1/2.5" detector (5.70 x 4.28 mm)	(mm × mm)	31.0 x 23.3
with 1/2" detector (6.4 x 4.8 mm)	(mm × mm)	34.8 x 26.1
with 1/1.8" detector (7.13 x 5.37 mm)	(mm × mm)	38.8 x 29.2
with 2/3" - 5 MP detector (8.45 x 7.07 mm)	(mm × mm)	46.0 x 38.4

Optical specifications

Working distance (1)	(mm)	132.9
wF/# (2)		8
Telecentricity typical (max) (3)	(deg)	< 0.08 (0.10)
Distortion typical (max) (4)	(%)	< 0.05 (0.10)
Field depth (5)	(mm)	20
CTF @ 70 lp/mm	(%)	> 40

Dimensions

Mount		C
A	(mm)	77
B	(mm)	106
C	(mm)	135
Mass	(g)	1129

Compatibility

LTCLCR048-x, CMHOCR048, CMPTCR048, LTCLHP048-x

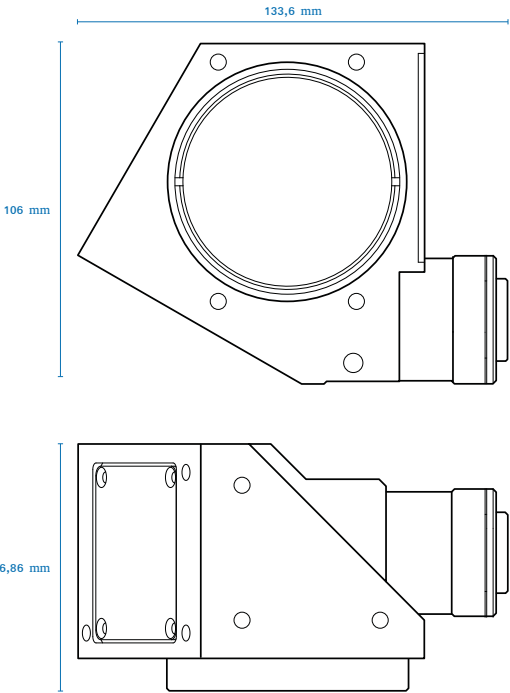
NOTES

- 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 perfectly sharp image, only half of the nominal field depth should be considered. Pixel size used for calculation is 5.5 µm.
- 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).
- Indicates the availability of an integrated camera phase adjustment feature.
- Due to the special shape of TCCR120xx it might be necessary to check the mechanical compatibility with your camera.
- 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



LTCLHP048-R	Telecentric HP illuminator, beam diameter 60 mm, red
LTCLHP048-G	Telecentric HP illuminator, beam diameter 60 mm, green



LTCLHP048-B	Telecentric HP illuminator, beam diameter 60 mm, blue
LTCLHP048-W	Telecentric HP illuminator, beam diameter 60 mm, white



LTCLCR048-R	Telecentric CORE illuminator, beam dimensions Ø = 56; x = 50, red
LTCLCR048-G	Telecentric CORE illuminator, beam dimensions Ø = 56; x = 50, green
LTCLCR048-W	Telecentric CORE illuminator, beam dimensions Ø = 56; x = 50, white



CMHOCR048	Clamping mechanics for CORE telecentric lenses and illuminators TCCRxx48 and LTCLCR048-x
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CMPTCR048	Mechanical components designed for CORE telecentric lenses and illuminators Ø 48mm
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