

TCCR2M048-E

Telecentric CORE lens for 1" detectors, magnification 0.268 x, M42x1 FD=16

SPECIFICATIONS

Part number	TCCR2M048-E	
Magnification	(x)	0.268
Image shape dimension (8)	(\emptyset , x mm)	$\emptyset=16.1$, x=13.9
Phase adjustment (7)	Yes	

Object field of view 7

with KAI-2020 14.8 mm diagonal w x h 11.84 x 8.88	(mm x mm)	44.2 x 33.1
with KAI-04050 16 mm diagonal w x h 12.8 x 9.6	(mm x mm)	47.8 x 35.8
with KAI-4022/4021 21.5 mm diagonal w x h 15.2 x 15.2	(mm x mm)	$\emptyset=60$, x=52
with KAI-08050 22.6 mm diagonal w x h 18.1 x 13.6	(mm x mm)	$\emptyset=60$, x=51

Optical specifications

Working distance (1)	(mm)	133.41
wF/# (2)	16	
Telecentricity typical (max) (3)	(deg)	< 0.08 (0.10)
Distortion typical (max) (4)	(%)	< 0.08 (0.10)
Field depth (5)	(mm)	17
CTF@ 50 lp/mm	(%)	> 30

Mechanical specifications

Mount (6)	M42x1	
A	(mm)	77
B	(mm)	112
C	(mm)	170
Mass	(g)	1267

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 milliradians, 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 μ m.
- In case the of vignetting, FOV dimensions are indicated with " $\emptyset =$, x=", where " $\emptyset =$ " 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.
- Indicates the dimensions and shape of image, where " $\emptyset =$ " stands for diameter and "x=" indicates the nominal image height and length (see [Tech Info](#) for related drawing)

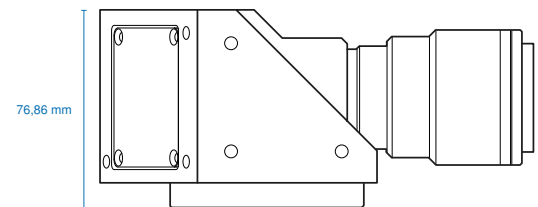
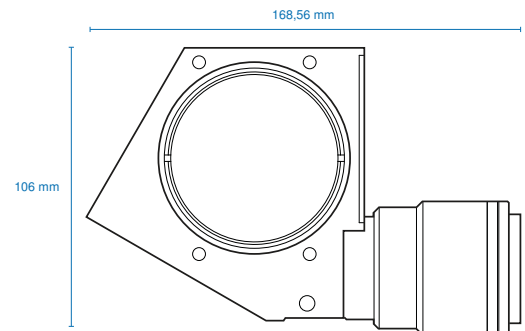
COMPATIBLE PRODUCTS



LTCLHP series
High-performance telecentric illuminators

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

LTCLHP CORE series





Ultra compact telecentric illuminators

LTCLCR048-R Telecentric CORE illuminator, beam dimensions $\varnothing = 56$; x = 50, red

LTCLCR048-G Telecentric CORE illuminator, beam dimensions $\varnothing = 56$; x = 50, green

LTCLCR048-W Telecentric CORE illuminator, beam dimensions $\varnothing = 56$; x = 50, white



CMHOCR series

Clamping mechanics CORE series

CMHOCR048 Clamping mechanics for CORE telecentric lenses and illuminators TCCRxx48 and LTCLCR048-x



CMPTCR series

Mounting plates CORE series

CMPTCR048 Mechanical components designed for CORE telecentric lenses and illuminators $\varnothing 48$ mm
