



TCCR2M080-C

Telecentric CORE lens for 1" detectors, magnification 0.160 x, C-mount

OPTO ENGINEERING

SPECIFICATIONS

Part number	TCCR2M080-C	
Magnification	(x)	0.160
Image shape dimension (8)	(\varnothing , x mm)	$\varnothing=16.3$, x=13.8
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)	74.0 x 55.5
with KAI-04050 16 mm diagonal w x h 12.8 x 9.6	(mm x mm)	80.0 x 60.0
with KAI-4022/4021 21.5 mm diagonal w x h 15.2 x 15.2	(mm x mm)	$\varnothing=102$, x=86
with KAI-08050 22.6 mm diagonal w x h 18.1 x 13.6	(mm x mm)	$\varnothing=102$, x=85

Optical specifications

Working distance (1)	(mm)	226.76
wF/# (2)	16	
Telecentricity typical (max) (3)	(deg)	< 0.04 (0.08)
Distortion typical (max) (4)	(%)	< 0.05 (0.10)
Field depth (5)	(mm)	46
CTF@ 50 lp/mm	(%)	> 40

Mechanical specifications

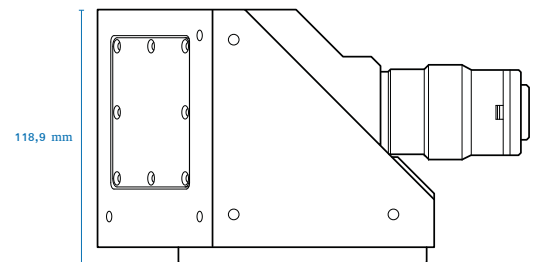
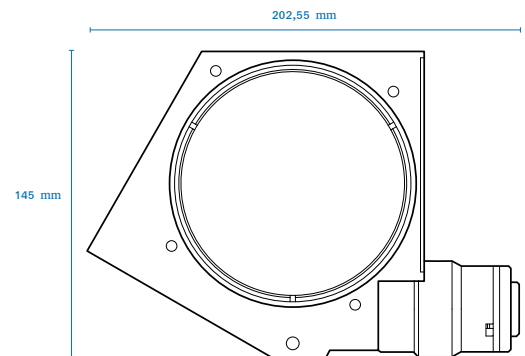
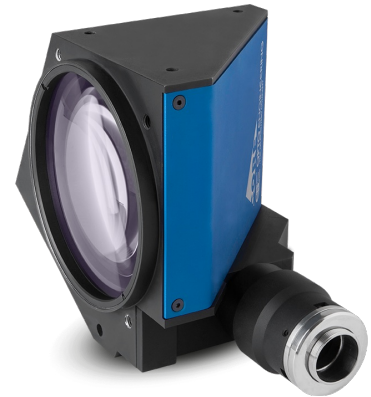
Mount (6)	C	
A	(mm)	119
B	(mm)	145
C	(mm)	205
Mass	(g)	3082

Compatibility

LTCLCR080-x, CMHOCR080, CMPTCR080, LTCLHP080-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 μm .
- In case the of vignetting, FOV dimensions are indicated with " $\varnothing =$, x =", where " $\varnothing =$ " 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 " $\varnothing =$ " stands for diameter and "x=" indicates the nominal image height and length (see [Tech Info](#) for related drawing)



COMPATIBLE PRODUCTS



LTCLHP080-R	Telecentric HP illuminator, beam diameter 100 mm, red
LTCLHP080-G	Telecentric HP illuminator, beam diameter 100 mm, green
LTCLHP080-B	Telecentric HP illuminator, beam diameter 100 mm, blue
LTCLHP080-W	Telecentric HP illuminator, beam diameter 100 mm, white



LTCLCR080-R Telecentric CORE illuminator, beam dimensions $\varnothing = 98$; x = 90, red

LTCLCR080-G Telecentric CORE illuminator, beam dimensions $\varnothing = 98$; x = 90, green

LTCLCR080-W Telecentric CORE illuminator, beam dimensions $\varnothing = 98$; x = 90, white



CMHOCR080 Clamping mechanics for CORE telecentric lenses and illuminators TCCRxx80 and LTCLCR080-x



CMPTCR080 Mechanical components designed for CORE telecentric lenses and illuminators $\varnothing 80$ mm
