

TCCR1M056-C

Telecentric CORE lens for 1/1.2" detectors, magnification 0.190 x, mount C, WD=157.8

SPECIFICATIONS

Part number		TCCR1MHR056-C
Magnification	(x)	0.190
Image shape dimension (8)	(\emptyset , x mm)	$\emptyset=13.4$, x=11.6
Phase adjustment (7)		Yes

Object field of view 7

with IMX174/IMX249 13.3 mm diag w x h 11.35 x 7.13	(mm x mm)	59.5 x 37.4
with KAI-2020 14.8 mm diagonal w x h 11.84 x 8.88	(mm x mm)	59.5 x 37.4
with IMX253/IMX304 17.6 mm diag w x h 14.16 x 10.37	(mm x mm)	$\emptyset=71$, x=55
with KAI-4022/4021 21.5 mm diagonal w x h 15.2 x 15.2	(mm x mm)	$\emptyset=71$, x=61
with KAI-08050 22.6 mm diagonal w x h 18.1 x 13.6	(mm x mm)	$\emptyset=71$, x=61

Optical specifications

Working distance (1)	(mm)	157.8
wF/# (2)		8
Telecentricity typical (max) (3)	(deg)	< 0.08 (0.10)
Distortion typical (max) (4)	(%)	< 0.08 (0.10)
Field depth (5)	(mm)	18.3
CTF@ 50 lp/mm	(%)	> 55

Mechanical specifications

Mount (6)		C
A	(mm)	94
B	(mm)	110
C	(mm)	154
Mass	(g)	1579

Compatibility

{compatibility}

Last update: 2019-05-10

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

Despite the efforts made to generate an error-free compatibility list, we always recommend to consult the Opto Engineering® technical support department before purchasing a compatible product. Opto Engineering® shall not be liable for any damage or malfunctioning caused by the incorrect selection of a compatible product.

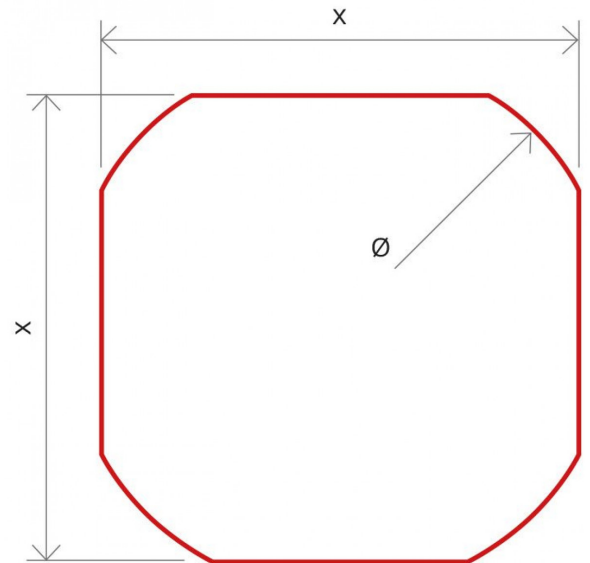
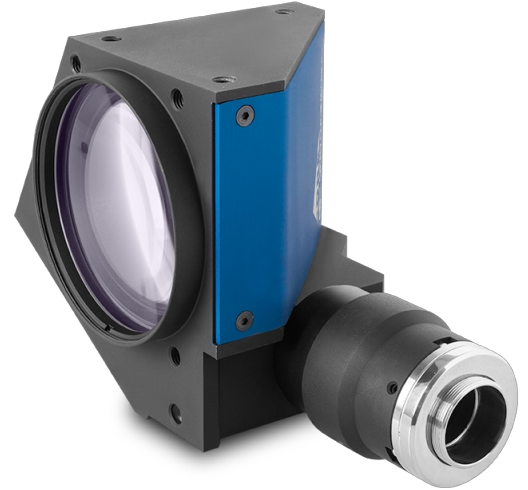


Image shape dimensions (\emptyset , x)

All product specifications and data are subject to change without notice to improve reliability, functionality, design or other. Photos and pictures are for illustration purposes only.



LTCLHP CORE series

Ultra compact telecentric illuminators

LTCLCR056-R	Telecentric CORE illuminator, beam dimensions Ø = 74; x = 66, red
LTCLCR056-G	Telecentric CORE illuminator, beam dimensions Ø = 74; x = 66, green
LTCLCR056-W	Telecentric CORE illuminator, beam dimensions Ø = 74; x = 66, 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



CMHOCR series

Clamping mechanics CORE series

CMHOCR056	Clamping mechanics for CORE telecentric lenses and illuminators TCRRx56 and LTCLCR056-x
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COE-G series

GenlCam® PoE cameras

COE-023-M-POE-050-IR-C	Area Scan camera PYTHON 2000, CMOS, Global shutter, 1920 x 1200, 2.3 MP, 4.8 pix, 2/3", Gray, 51 fps, GigE, POE, C - mount, Glass filter
COE-023-C-POE-050-IR-C	Area Scan camera PYTHON 2000, CMOS, Global shutter, 1920 x 1200, 2.3 MP, 4.8 pix, 2/3", Color, 51 fps, GigE, POE, C - mount, Infrared cut filter
COE-050-M-POE-050-IR-C	Area Scan camera IMX264, CMOS, Global shutter, 2448 x 2048, 5 MP, 3.45 pix, 2/3", Gray, 23.5 fps, GigE, POE, C - mount, Glass filter
COE-050-C-POE-050-IR-C	Area Scan camera IMX264, CMOS, Global shutter, 2448 x 2048, 5 MP, 3.45 pix, 2/3", Color, 23.5 fps, GigE, POE, C - mount, Infrared cut filter
COE-023-M-POE-060-IR-C	Area Scan camera IMX249, CMOS, Global shutter, 1920 x 1200, 2.3 MP, 5.86 pix, 1/1.2", Gray, 41 fps, GigE, POE, C - mount, Glass filter
COE-023-C-POE-060-IR-C	Area Scan camera IMX249, CMOS, Global shutter, 1920 x 1200, 2.3 MP, 5.86 pix, 1/1.2", Color, 41 fps, GigE, POE, C - mount, Infrared cut filter



COE-U series

USB 3.0 GenlCam® cameras

COE-050-M-USB-050-IR-C	Area Scan camera IMX264, CMOS, Global shutter, 2448 x 2048, 5 MP, 3.45 pix, 2/3", Gray, 35 fps, USB 3.0, C - mount, Glass filter
COE-050-C-USB-050-IR-C	Area Scan camera IMX264, CMOS, Global shutter, 2448 x 2048, 5 MP, 3.45 pix, 2/3", Color, 35 fps, USB 3.0, C - mount, Infrared cut filter
COE-023-M-USB-060-IR-C	Area Scan camera IMX249, CMOS, Global shutter, 1920 x 1200, 2.3 MP, 5.86 pix, 1/1.2", Gray, 41 fps, USB 3.0, C - mount, Glass filter
COE-023-C-USB-060-IR-C	Area Scan camera IMX249, CMOS, Global shutter, 1920 x 1200, 2.3 MP, 5.86 pix, 1/1.2", Color, 40 fps, USB 3.0, C - mount, Infrared cut filter



mvBlueFOX3-2 series

USB3 vision camera with Sony Pregius CMOS sensors

RT-mvBF3-2051a	USB3 Vision camera with Sony Pregius CMOS sensor IMX264
RT-mvBF3-2051	USB3 Vision camera with Sony Pregius CMOS sensor IMX250
RT-mvBF3-2024a	USB3 Vision camera with Sony Pregius CMOS sensor IMX249
RT-mvBF3-2024	USB3 Vision camera with Sony Pregius CMOS sensor IMX174



mvBlueCOUGAR series

GigE & Dual GigE Vision cameras

RT-mvBC-X105b	Camera with interface GigE (1GB/s), sensor size 2/3", mpixel 5.07, resolution 2464 x 2056, sensor name IMX264, sensor type CMOS
RT-mvBC-XD105a	Camera with interface Dual GigE (2GB/s), sensor size 2/3", mpixel 5.01, resolution 2448 x 2048, sensor name IMX250, sensor type CMOS
RT-mvBC-X104f	Camera with interface GigE (1GB/s), sensor size 1/1.2", mpixel 2.35, resolution 1936 x 1216, sensor name IMX249, sensor type CMOS
RT-mvBC-XD104d	Camera with interface Dual GigE (2GB/s), sensor size 1/1.2", mpixel 2.35, resolution 1936 x 1214, sensor name IMX174, sensor type CMOS



TCLIB Suite

Software library & stand-alone tools for the optimization of telecentric setups

TCLIB-01 Software library & stand-alone tools for the optimization of telecentric setups
