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TC13064

Bi-telecentric lens for 1/3" detectors, magnification 0.074 x, C-mount

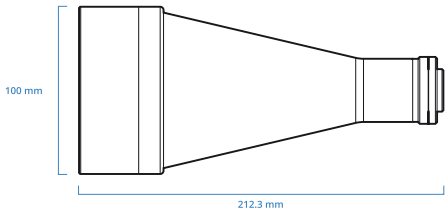
SPECIFICATIONS

Magnification	(×)	0.074
Image circle Ø	(mm)	6.0

Object field of view (8)		
with 1/3" detector (4.8 x 3.6 mm)	(mm × mm)	64.86 x 48.65
with 1/2.5" detector (5.70 x 4.28 mm)	(mm × mm)	ø = 57.8
with 1/2" detector (6.4 x 4.8 mm)	(mm × mm)	ø = 64.9
with 1/1.8" detector (7.13 x 5.37 mm) (7)	(mm × mm)	ø = 72.0
with 2/3" - 5 MP detector (8.45 x 7.07 mm)	(mm × mm)	ø = 81.1

Optical specifications		
Working distance (1)	(mm)	181.9
wF/# (2)		8
Telecentricity typical (max) (3)	(deg)	< 0.06 (0.08)
Distortion typical (max) (4)	(%)	< 0.03 (0.07)
Field depth (5)	(mm)	124
CTF @ 70 lp/mm	(%)	> 40

Dimensions		
Mount		C
Phase Adjustment (9)		
Length (6)	(mm)	212.3
Diameter	(mm)	100
Mass	(g)	1000



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 (higher 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 very sharp image, only half of the nominal field depth should be considered. Pixel size used for calculation is 5.5 µm.
6. Measured from the front end of the mechanics to the camera flange.
7. With 1/1.8" (8.9 mm diagonal) detectors, the FOV of TC12yyy lenses may show some vignetting at the image corners, as these lenses are optimized for 1/2" detectors (8 mm diagonal).
8. For the fields with the indication "Ø =", the image of a circular object of such diameter is fully inscribed into the detector.
9. Indicates the availability of an integrated camera phase adjustment feature. If missing, it can be supplied upon request (except for TC23004, TC23007,TC23009, TC23012).

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.

LTCLHP series

High-performance telecentric illuminators

LTCLHP064-R	Telecentric HP illuminator, beam diameter 80 mm, red

LTCLHP064-G	Telecentric HP illuminator, beam diameter 80 mm, green
LTCLHP064-B	Telecentric HP illuminator, beam diameter 80 mm, blue
LTCLHP064-W	Telecentric HP illuminator, beam diameter 80 mm, white

LTCLHP CORE series

Ultra compact telecentric illuminators

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

LTLA series

High-power strobed LED low angle diffused ringlights

LTLAC1-W	Diffusive strobed low angle ring light illuminator - large size medium power white
LTLAC2-R	Diffusive strobed low angle ring light illuminator - large size high power red
LTLAC2-G	Diffusive strobed low angle ring light illuminator - large size high power green
LTLAC2-W	Diffusive strobed low angle ring light illuminator - large size high power white

LTLAIC series (discontinued models)

Continuous LED low angle diffused ringlights

LT2RZF120-60-2-W-24V	LED ringlight, 2 LED rows, 126.5 mm outer diameter, 60°, white, 24V
LT2RZF120-60-2-R-24V	LED ringlight, 2 LED rows, 126.5 mm outer diameter, 60°, red, 24V
LT2RZF120-60-2-G-24V	LED ringlight, 2 LED rows, 126.5 mm outer diameter, 60°, green, 24V
LT2RZF120-60-2-B-24V	LED ringlight, 2 LED rows, 126.5 mm outer diameter, 60°, blue, 24V

LTLAIC series

Continuous LED low angle diffused ringlights

LT3RZF130-60-1-W-24V	LED ringlight, 1 LED row, 131.5 mm outer diameter, 60°, white, 24V
LT3RZF130-60-1-R-24V	LED ringlight, 1 LED row, 131.5 mm outer diameter, 60°, red, 24V
LT3RZF130-60-1-G-24V	LED ringlight, 1 LED row, 131.5 mm outer diameter, 60°, green, 24V
LT3RZF130-60-1-B-24V	LED ringlight, 1 LED row, 131.5 mm outer diameter, 60°, blue, 24V

LTLADC series

Continuous LED low angle direct ringlights

LTZZO130-75-3-W-24V	LED low angle ringlight, 3 LED rows, outer diameter 131 mm, 75°, white, 24V
LTZZO130-75-3-R-24V	LED low angle ringlight, 3 LED rows, outer diameter 131 mm, 75°, red, 24V
LTZZO130-75-3-G-24V	LED low angle ringlight, 3 LED rows, outer diameter 131 mm, 75°, green, 24V
LTZZO130-75-3-B-24V	LED low angle ringlight, 3 LED rows, outer diameter 131 mm, 75°, blue, 24V

LTRNST series

LED ring illuminators - straight type

LTRN064RD	Ring LED illuminator, inner diameter 100 mm, straight type, red 630 nm
LTRN064GR	Ring LED illuminator, inner diameter 100 mm, straight type, green 525 nm
LTRN064BL	Ring LED illuminator, inner diameter 100 mm, straight type, blue 470 nm
LTRN064NW	Ring LED illuminator, inner diameter 100 mm, straight type, white

LTBC series

Continuos LED backlight

LTBC114114-W	Continuos LED backlight, 114x114 illumination area, white
LTBC114114-G	Continuos LED backlight, 114x114 illumination area, green

LTBFC series

Continuous flat side-emitting LED backlights

LTPVR100-00-1-W-24V	Flat side-emitting LED backlight, 100X100 mm illumination area, white, 24V
LTPVR100-00-1-R-24V	Flat side-emitting LED backlight, 100X100 mm illumination area, red, 24V
LTPVR100-00-1-G-24V	Flat side-emitting LED backlight, 100X100 mm illumination area, green, 24V
LTPVR100-00-1-B-24V	Flat side-emitting LED backlight, 100X100 mm illumination area, blue, 24V

LTBRDC series

Continuous LED bar lights

LTZPFL120-00-6-W-24V	LED bar light, 6 LED rows, 120X26.3 illumination area, white, 24V
LTZPFL120-00-6-R-24V	LED bar light, 6 LED rows, 120X26.3 illumination area, red, 24V
LTZPFL120-00-6-G-24V	LED bar light, 6 LED rows, 120X26.3 illumination area, green, 24V
LTZPFL120-00-6-B-24V	LED bar light, 6 LED rows, 120X26.3 illumination area, blue, 24V

LTCXC series

Continuous LED coaxial lights

LT2QOG100-00-X-W-24V	LED coaxial light, 100x100 mm light emitting area, white, 24V
LT2QOG100-00-X-R-24V	LED coaxial light, 100x100 mm light emitting area, red, 24V
LT2QOG100-00-X-G-24V	LED coaxial light, 100x100 mm light emitting area, green, 24V
LT2QOG100-00-X-B-24V	LED coaxial light, 100x100 mm light emitting area, blue, 24V

CMBS series

45° beam splitters

CMBS064	45° beam splitter with mount for 100 mm clamping diameter optics

CMMR series

45° first surface mirrors

CMMR064	45° first surface mirror for 100 mm clamping diameter optics

WI series

Protective windows

WI064	Protective window for 100 mm clamping diameter optics

CMHO series

Clamping mechanics

CMHO064	Clamping mechanics for TCxx064 lenses and LTCLHP064-X illuminators

PTTC, PTCP series

Accurate calibration patterns for machine vision systems

PT064-096	Calibration pattern
PT064-096-C	Calibration pattern for telecentric lenses with a certificate of conformity

CMT series

Precision alignment mechanics

CMTH064	Precision alignment mechanics for telecentric optics 064

LTPR series

LED patterns projectors

LTPRHP3W-W	LED pattern projector 3W, HP, white
LTPRHP3W-R	LED pattern projector 3W, HP, red
LTPRHP3W-G	LED pattern projector 3W, HP, green
LTPRHP3W-B	LED pattern projector 3W, HP, blue
LTPRUP-W	90W strobed LED pattern projector white

LTPRUP-R	90W strobed LED pattern projector red
LTPRUP-G	90W strobed LED pattern projector green
LTPRUP-B	90W strobed LED pattern projector blue

COE-G series

GenICam® PoE cameras

COE-003-M-POE-010-IR-C	Area Scan camera Python 300, CMOS, Global shutter, 640 x 480, 0.3 MP, 4.8 pix, 1/4", Gray, GigE, POE, 173 fps, C - mount, Glass filter
COE-004-M-POE-010-IR-C	Area Scan camera Python 300, CMOS, Global shutter, 640 x 480, 0.3 MP, 4.8 pix, 1/4", Gray, 300 fps, GigE, POE, C - mount, Glass filter
COE-003-C-POE-010-IR-C	Area Scan camera Python 300, CMOS, Global shutter, 640 x 480, 0.3 MP, 4.8 pix, 1/4", Color, 173 fps, GigE, POE, C - mount, Infrared cut filter
COE-004-C-POE-010-IR-C	Area Scan camera Python 300, CMOS, Global shutter, 640 x 480, 0.3 MP, 4.8 pix, 1/4", Color, 300 fps, GigE, POE, C - mount, Infrared cut filter
COE-003-M-POE-020-IR-C	Area Scan camera RJ33B4AD0DT, CCD, Global shutter, 640 x 480, 0.3 MP, 7.4 pix, 1/3", Gray, 200 fps, GigE, POE, C - mount, Glass filter
COE-003-C-POE-020-IR-C	Area Scan camera RJ33B4AD0DT, CCD, Global shutter, 640 x 480, 0.3 MP, 7.4 pix, 1/3", Color, 200 fps, GigE, POE, C - mount, Infrared cut filter
COE-012-M-POE-020-IR-C	Area Scan camera RJ33J4CA3DE, CCD, Global shutter, 1280 x 960, 1.2 MP, 3.75 pix, 1/3", Gray, 30 fps, GigE, POE, C - mount, Glass filter
COE-012-C-POE-020-IR-C	Area Scan camera RJ33J4CA3DE, CCD, Global shutter, 1280 x 960, 1.2 MP, 3.75 pix, 1/3", Color, 30 fps, GigE, POE, C - mount, Infrared cut filter

COE-U series

USB 3.0 GenICam® cameras

COE-003-M-USB-010-IR-C	Area Scan camera PYTHON 300, CMOS, Global shutter, 640 x 480, 0.3 MP, 4.8 pix, 1/4", Gray, 814 fps, USB 3.0, C - mount, Glass filter
COE-003-C-USB-010-IR-C	Area Scan camera PYTHON 300, CMOS, Global shutter, 640 x 480, 0.3 MP, 4.8 pix, 1/4", Color, 814 fps, USB 3.0, C - mount, Infrared cut filter

mvBlueCOUGAR series

GigE & Dual GigE Vision cameras

RT-mvBC-X100w	Camera with interface GigE (1GB/s), sensor size 1/3", mpixel 0.36, resolution 752 x 480, sensor name MT9V034, sensor type CMOS

Accessories

Accessories and add-ons to make the most of Opto Engineering lenses.

RT-mvBC-X104iC	CMOS camera GIGE, 2064 x 1544 color, 1/1.8", 37 Hz, IR cut, C-mount, I/O
RT-mvBC-X105bC	CMOS camera GIGE, 2464 x 2056 Colour sensor, 2/3", 23.5 Hz, IR cut, C-mount, I/O