

# MC100X

Macro lens for 2/3" detectors, magnification 1.00 x, C-mount

## SPECIFICATIONS

### Optical specifications

Magnification	(x)	1
Working distance <sup>1</sup>	(mm)	47.0
Focal length	(mm)	28.2
F/# (wF/#) <sup>2</sup>		5.0 (10)
Distortion	(%)	< 0.01
Field depth <sup>3</sup>	(mm)	0.40

### Object field of view

with 1/3" detector (4.8 x 3.6 mm)	(mm x mm)	4.80 x 3.60
with 1/2.5" detector (5.70 x 4.28 mm)	(mm x mm)	5.70 x 4.30
with 1/2" detector (6.4 x 4.8 mm)	(mm x mm)	6.40 x 4.80
with 1/1.8" detector (7.13 x 5.33 mm)	(mm x mm)	7.10 x 5.40
with 2/3" - 5 MP detector (8.50 x 7.09 mm)	(mm x mm)	8.40 x 7.10

### Mechanical specifications

Length <sup>2</sup>	(mm)	49.9
Diameter	(mm)	15.0
Height	(mm)	30
Mass	(g)	67
Mount		C

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## NOTES

- Working distance: distance between the front end of the mechanics and the object.
- Working F-number: the real F-number of a lens in operating conditions.
- 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 3.45 µm

## 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.



LTBC series

Continuous LED backlight

LTBC054054-W	Continuous LED backlight, 54x54 illumination area, white
LTBC054054-G	Continuous LED backlight, 54x54 illumination area, green



LTBFC series

Continuous flat side-emitting LED backlights

LTPVRG25X36-00-1-W-24V	Flat side-emitting LED backlight, thin borders, 25X36 mm illumination area, white, 24V
LTPVRG25X36-00-1-R-24V	Flat side-emitting LED backlight, thin borders, 25X36 mm illumination area, red, 24V
LTPVRG25X36-00-1-G-24V	Flat side-emitting LED backlight, thin borders, 25X36 mm illumination area, green, 24V



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.

LTPVRG25X36-00-1-B-24V Flat side-emitting LED backlight, thin borders, 25X36 mm illumination area, blue, 24V



LTLAIC series (discontinued models)

Continuous LED low angle diffused ring lights

<a href="#">LT2RZF050-60-2-W-24V</a>	LED ring light, 2 LED rows, 50.8 mm outer diameter, 60°, white, 24V
<a href="#">LT2RZF050-60-2-R-24V</a>	LED ring light, 2 LED rows, 50.8 mm outer diameter, 60°, red, 24V
<a href="#">LT2RZF050-60-2-G-24V</a>	LED ring light, 2 LED rows, 50.8 mm outer diameter, 60°, green, 24V
<a href="#">LT2RZF050-60-2-B-24V</a>	LED ring light, 2 LED rows, 50.8 mm outer diameter, 60°, blue, 24V



LTRNDC series

Continuous LED direct ring lights

<a href="#">LTZGK040-00-2-R-24V</a>	LED ring light, 2 LED rows, outer diameter 43 mm, 0°, red, 24V
<a href="#">LTZGK040-00-2-G-24V</a>	LED ring light, 2 LED rows, outer diameter 43 mm, 0°, green, 24V
<a href="#">LTZGK040-00-2-B-24V</a>	LED ring light, 2 LED rows, outer diameter 43 mm, 0°, blue, 24V
<a href="#">LTZGK040-00-2-W-24V</a>	LED ring light, 2 LED rows, outer diameter 43 mm, 0°, white, 24V
<a href="#">LTZGK050-15-2-R-24V</a>	LED ring light, 2 LED rows, outer diameter 50 mm, 15°, red, 24V
<a href="#">LTZGK050-15-2-G-24V</a>	LED ring light, 2 LED rows, outer diameter 50 mm, 15°, green, 24V
<a href="#">LTZGK050-15-2-B-24V</a>	LED ring light, 2 LED rows, outer diameter 50 mm, 15°, blue, 24V
<a href="#">LTZGK050-15-2-W-24V</a>	LED ring light, 2 LED rows, outer diameter 50 mm, 15°, white, 24V
<a href="#">LTZGK070-30-3-R-24V</a>	LED ring light, 3 LED rows, outer diameter 70 mm, 30°, red, 24V
<a href="#">LTZGK070-30-3-G-24V</a>	LED ring light, 3 LED rows, outer diameter 70 mm, 30°, green, 24V
<a href="#">LTZGK070-30-3-B-24V</a>	LED ring light, 3 LED rows, outer diameter 70 mm, 30°, blue, 24V
<a href="#">LTZGK070-30-3-W-24V</a>	LED ring light, 3 LED rows, outer diameter 70 mm, 30°, white, 24V
<a href="#">LTZGK090-30-4-R-24V</a>	LED ring light, 4 LED rows, outer diameter 92 mm, 30°, red, 24V
<a href="#">LTZGK090-30-4-G-24V</a>	LED ring light, 4 LED rows, outer diameter 92 mm, 30°, green, 24V
<a href="#">LTZGK090-30-4-B-24V</a>	LED ring light, 4 LED rows, outer diameter 92 mm, 30°, blue, 24V
<a href="#">LTZGK090-30-4-W-24V</a>	LED ring light, 4 LED rows, outer diameter 92 mm, 30°, white, 24V
<a href="#">LTZGK070-45-3-R-24V</a>	LED ring light, 3 LED rows, outer diameter 70 mm, 45°, red, 24V
<a href="#">LTZGK070-45-3-G-24V</a>	LED ring light, 3 LED rows, outer diameter 70 mm, 45°, green, 24V
<a href="#">LTZGK070-45-3-B-24V</a>	LED ring light, 3 LED rows, outer diameter 70 mm, 45°, blue, 24V
<a href="#">LTZGK070-45-3-W-24V</a>	LED ring light, 3 LED rows, outer diameter 70 mm, 45°, white, 24V



LTLA series

High power strobed LED low angle diffused ring lights

<a href="#">LTLAB2-R</a>	Diffusive strobed low angle ring light illuminator - medium size high power red
<a href="#">LTLAB2-G</a>	Diffusive strobed low angle ring light illuminator - medium size high power green
<a href="#">LTLAB2-W</a>	Diffusive strobed low angle ring light illuminator - medium size high power white



LTLAIC series

Continuous LED low angle diffused ring lights

<a href="#">LT3RZF050-60-1-W-24V</a>	LED ring light, 1 LED row, 56.4 mm outer diameter, 60°, white, 24V
<a href="#">LT3RZF050-60-1-R-24V</a>	LED ring light, 1 LED row, 56.4 mm outer diameter, 60°, red, 24V
<a href="#">LT3RZF050-60-1-G-24V</a>	LED ring light, 1 LED row, 56.4 mm outer diameter, 60°, green, 24V
<a href="#">LT3RZF050-60-1-B-24V</a>	LED ring light, 1 LED row, 56.4 mm outer diameter, 60°, blue, 24V



LTLADC series

Continuous LED low angle direct ring lights

<a href="#">LTZZO130-75-3-W-24V</a>	LED low angle ring light, 3 LED rows, outer diameter 131 mm, 75°, white, 24V
<a href="#">LTZZO130-75-3-R-24V</a>	LED low angle ring light, 3 LED rows, outer diameter 131 mm, 75°, red, 24V
<a href="#">LTZZO130-75-3-G-24V</a>	LED low angle ring light, 3 LED rows, outer diameter 131 mm, 75°, green, 24V
<a href="#">LTZZO130-75-3-B-24V</a>	LED low angle ring light, 3 LED rows, outer diameter 131 mm, 75°, blue, 24V



LTRNOB series

LED ring illuminators - oblique type

LTRN050R45	Ring LED illuminator, inner diam. 15.2 mm, oblique type, red 630 nm
LTRN050G45	Ring LED illuminator, inner diam. 15.2 mm, oblique type, green 525 nm
LTRN050B45	Ring LED illuminator, inner diam. 15.2 mm, oblique type, blue 470 nm
LTRN050W45	Ring LED illuminator, inner diameter 15.2 mm, oblique type, white



LTBRDC series

Continuous LED bar lights

LTZPFL040-00-6-R-24V	LED bar light, 6 LED rows, 40X26.3 illumination area, red, 24V
LTZPFL040-00-6-G-24V	LED bar light, 6 LED rows, 40X26.3 illumination area, green, 24V
LTZPFL040-00-6-B-24V	LED bar light, 6 LED rows, 40X26.3 illumination area, blue, 24V
LTZPFL040-00-6-W-24V	LED bar light, 6 LED rows, 40X26.3 illumination area, white, 24V



LTCXC series

Continuous LED coaxial lights

LT2QOG025-00-X-W-24V	LED coaxial light, 25x25.6 mm light emitting area, white, 24V
LT2QOG025-00-X-R-24V	LED coaxial light, 25x25.6 mm light emitting area, red, 24V
LT2QOG025-00-X-G-24V	LED coaxial light, 25x25.6 mm light emitting area, green, 24V
LT2QOG025-00-X-B-24V	LED coaxial light, 25x25.6 mm light emitting area, blue, 24V



COE-G series

GenICam® PoE C-mount cameras

COE-013-M-POE-030-IR-C	Area Scan camera PYTHON 1300, CMOS, Global shutter, 1280 x 1024, 1.3 MP, 4.8 pix, 1/2", mono, 90 fps, GigE, POE, C - mount, Glass filter
COE-013-C-POE-030-IR-C	Area Scan camera PYTHON 1300, CMOS, Global shutter, 1280 x 1024, 1.3 MP, 4.8 pix, 1/2", color, 90 fps, GigE, POE, C - mount, Infrared cut filter
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", mono, 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-032-M-POE-040-IR-C	Area Scan camera IMX265, CMOS, Global shutter, 2048 x 1536, 3.1 MP, 3.45 pix, 1/1.8", mono, 37.5 fps, GigE, POE, C - mount, Glass filter
COE-032-C-POE-040-IR-C	Area Scan camera IMX265, CMOS, Global shutter, 2048 x 1536, 3.1 MP, 3.45 pix, 1/1.8", color, 37.5 fps, GigE, POE, C - mount, Infrared cut filter
COE-050-M-POE-023-IR-C	Area Scan camera MT9P031, CMOS, Rolling shutter, 2592 x 1944, 5 MP, 2.2 pix, 1/2.5", mono, 14 fps, GigE, POE, C - mount, Glass 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", mono, 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-106-M-POE-031-IR-C-2	Area Scan camera MT9J003, CMOS, Rolling shutter, 3840 x 2748, 10.6 MP, 1.67 pix, 1/2.3", mono, 11 fps, GigE, POE, C - mount, Glass filter
COE-106-C-POE-031-IR-C	Area Scan camera MT9J003, CMOS, Global shutter, 3840 x 2748, 10.6 MP, 1.67 pix, 1/2.3", color, 7 fps, GigE, POE, C - mount, Infrared cut filter



mvBlueCOUGAR series



GigE / Dual GigE cameras with Smart Features

RT-mvBC-X104i	Camera with interface GigE (1GB/s), sensor size 1/1.8", mpixel 3.19, resolution 2064 x 1544, sensor name IMX265, sensor type CMOS
RT-mvBC-XD104h	Camera with interface Dual GigE (2GB/s), sensor size 1/1.8", mpixel 3.19, resolution 2064 x 1544, sensor name IMX252, sensor type CMOS
RT-mvBC-X105	Camera with interface GigE (1GB/s), sensor size 1/2.5", mpixel 5.04, resolution 2592 x 1944, sensor name MT9P031, sensor type CMOS
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-X1010	Camera with interface GigE (1GB/s), sensor size 1/2.3", mpixel 10.66, resolution 3856 x 2764, sensor name MT9J003, sensor type CMOS



COE-U series

## GenICam® C-mount USB3 cameras

<a href="#">COE-013-M-USB-030-IR-C</a>	Area Scan camera PYTHON 1300, CMOS, Global shutter, 1280 x 1024, 1.3 MP, 4.8 pix, 1/2", mono, 210 fps, USB 3.0, C - mount, Glass filter
<a href="#">COE-013-C-USB-030-IR-C</a>	Area Scan camera PYTHON 1300, CMOS, Global shutter, 1280 x 1024, 1.3 MP, 4.8 pix, 1/2", color, 90 fps, USB 3.0, C - mount, Infrared cut filter
<a href="#">COE-050-M-USB-050-IR-C</a>	Area Scan camera IMX264, CMOS, Global shutter, 2448 x 2048, 5 MP, 3.45 MP, 2/3", mono, 35 fps, USB 3.0, C - mount, Glass filter
<a href="#">COE-050-C-USB-023-IR-C</a>	Area Scan camera AR0521, CMOS, Rolling shutter, 2592 x 1944, 5 MP, 2.2 pix, 1/2.5", color, 31 fps, USB 3.0, C - mount, Infrared cut filter



mvBlueFOX3-2 series



USB3 cameras with Smart Features

<a href="#">RT-mvBF3-2032a</a>	USB3 Vision camera with Sony Pregius CMOS sensor IMX265
<a href="#">RT-mvBF3-2032</a>	USB3 Vision camera with Sony Pregius CMOS sensor IMX252
<a href="#">RT-mvBF3-2051a</a>	USB3 Vision camera with Sony Pregius CMOS sensor IMX264
<a href="#">RT-mvBF3-2051</a>	USB3 Vision camera with Sony Pregius CMOS sensor IMX250
<a href="#">RT-mvBF3-2064</a>	USB3 vision camera with Sony Pregius CMOS sensor IMX178