

# RT-TCL0450-FU

0.45x Telecentric lens with built-in coaxial illumination for detectors up to 1"

## SPECIFICATIONS

### Optical specifications

Magnification		0.45
Image circle Ø	(mm)	16
Max detector size		1"
Working distance	(mm)	108.2
wF/# 1		12 - 60
Distortion	(%)	0.008
Field depth	(mm)	2.2
Nominal resolving power	(µm)	18

### Object field of view

with 1/3" detector (4.8 x 3.6 mm)	(mm x mm)	10.7 x 8.0
with 1/2.5" detector (5.70 x 4.28 mm)	(mm x mm)	12.7 x 9.5
with 1/2" detector (6.4 x 4.8 mm)	(mm x mm)	14.2 x 10.7
with 1/1.8" detector (7.13 x 5.37 mm)	(mm x mm)	15.8 x 11.9
with 2/3" - 5 MP detector (8.45 x 7.07 mm)	(mm x mm)	18.8 x 15.7
with KAI-04050 16 mm diagonal w x h 12.8 x 9.6	(mm x mm)	28.4 x 21.3

### Mechanical specifications

Mount		C
Length	(mm)	265.44
Diameter	(mm)	49
Mass	(g)	512
Focus lock screws		-
Iris lock screws		Yes

Last update: 2015-02-13

## 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.
- F/# = F-number, wF/# = working F-number, the real F-number of a lens when used as a macro.

## 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.



LTLAIC series (discontinued models)

Continuous LED low angle diffused ringlights

<a href="#">LT2RZF070-60-2-W-24V</a>	LED ringlight, 2 LED rows, 76.2 mm outer diameter, 60°, white, 24V
<a href="#">LT2RZF070-60-2-R-24V</a>	LED ringlight, 2 LED rows, 76.2 mm outer diameter, 60°, red, 24V
<a href="#">LT2RZF070-60-2-G-24V</a>	LED ringlight, 2 LED rows, 76.2 mm outer diameter, 60°, green, 24V
<a href="#">LT2RZF070-60-2-B-24V</a>	LED ringlight, 2 LED rows, 76.2 mm outer diameter, 60°, blue, 24V



LTLAIC series

Continuous LED low angle diffused ringlights

<a href="#">LT3RZF080-60-1-W-24V</a>	LED ringlight, 1 LED row, 81 mm outer diameter, 60°, white, 24V
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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.

<a href="#">LT3RZF080-60-1-R-24V</a>	LED ringlight, 1 LED row, 81 mm outer diameter, 60°, red, 24V
<a href="#">LT3RZF080-60-1-G-24V</a>	LED ringlight, 1 LED row, 81 mm outer diameter, 60°, green, 24V
<a href="#">LT3RZF080-60-1-B-24V</a>	LED ringlight, 1 LED row, 81 mm outer diameter, 60°, blue, 24V



#### LTLADC series

Continuous LED low angle direct ringlights

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



#### LTBFC series

Continuous flat side-emitting LED backlights

<a href="#">LTPVR070-00-1-W-24V</a>	Flat side-emitting LED backlight, 70X70 mm illumination area, white, 24V
<a href="#">LTPVR070-00-1-R-24V</a>	Flat side-emitting LED backlight, 70X70 mm illumination area, red, 24V
<a href="#">LTPVR070-00-1-G-24V</a>	Flat side-emitting LED backlight, 70X70 mm illumination area, green, 24V
<a href="#">LTPVR070-00-1-B-24V</a>	Flat side-emitting LED backlight, 70X70 mm illumination area, blue, 24V
<a href="#">LTPVRG070-00-1-W-24V</a>	Flat side-emitting LED backlight, thin borders, 70X70 mm illumination area, white, 24V
<a href="#">LTPVRG070-00-1-R-24V</a>	Flat side-emitting LED backlight, thin borders, 70X70 mm illumination area, red, 24V
<a href="#">LTPVRG070-00-1-G-24V</a>	Flat side-emitting LED backlight, thin borders, 70X70 mm illumination area, green, 24V
<a href="#">LTPVRG070-00-1-B-24V</a>	Flat side-emitting LED backlight, thin borders, 70X70 mm illumination area, blue, 24V



#### LTBRDC series

Continuous LED bar lights

<a href="#">LTZPFL040-00-6-W-24V</a>	LED bar light, 6 LED rows, 40X26.3 illumination area, white, 24V
<a href="#">LTZPFL040-00-6-R-24V</a>	LED bar light, 6 LED rows, 40X26.3 illumination area, red, 24V
<a href="#">LTZPFL040-00-6-G-24V</a>	LED bar light, 6 LED rows, 40X26.3 illumination area, green, 24V
<a href="#">LTZPFL040-00-6-B-24V</a>	LED bar light, 6 LED rows, 40X26.3 illumination area, blue, 24V



#### mvBlueFOX3-2 series

USB3 vision camera with Sony Pregius CMOS sensors

<a href="#">RT-mvBF3-2024a</a>	USB3 Vision camera with Sony Pregius CMOS sensor IMX249
<a href="#">RT-mvBF3-2024</a>	USB3 Vision camera with Sony Pregius CMOS sensor IMX174
<a href="#">RT-mvBF3-2089a</a>	USB3 Vision camera with Sony Pregius CMOS sensor IMX267
<a href="#">RT-mvBF3-2089</a>	USB3 Vision camera with Sony Pregius CMOS sensor IMX255



#### mvBlueCOUGAR series

GigE & Dual GigE Vision cameras

<a href="#">RT-mvBC-X105b</a>	Camera with interface GigE (1GB/s), sensor size 2/3", mpixel 5.07, resolution 2464 x 2056, sensor name IMX264, sensor type CMOS
<a href="#">RT-mvBC-X104f</a>	Camera with interface GigE (1GB/s), sensor size 1/1.2", mpixel 2.35, resolution 1936 x 1216, sensor name IMX249, sensor type CMOS
<a href="#">RT-mvBC-XD104d</a>	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
<a href="#">RT-mvBC-X109b</a>	Camera with interface GigE (1GB/s), sensor size 1", mpixel 8.95, resolution 4112 x 2176, sensor name IMX267, sensor type CMOS
<a href="#">RT-mvBC-XD109b</a>	Camera with interface Dual GigE (2GB/s), sensor size 1", mpixel 8.95, resolution 4112 X 2176, sensor name IMX267, sensor type CMOS



#### COE HR AS-X series

20MP, 26MP and 29MP area scan cameras for high-speed applications

<a href="#">COE-200-M-POE-070-IR-C</a>	HR Area Scan camera IMX183, CMOS, Rolling shutter, 5472 x 3648, 20.4 MP, 2.4 pix, 1", Gray, GigE, 6 fps, POE, C - mount, Glass filter
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<a href="#">COE-200-C-POE-070-IR-C</a>	HR Area Scan camera IMX183, CMOS, Rolling shutter, 5472 × 3648, 20.4 MP, 2.4 pix, 1", Color, GigE, 6 fps, POE, C - mount, Infrared cut filter
<a href="#">COE-200-M-USB-070-IR-C</a>	HR Area Scan camera IMX183, CMOS, Rolling shutter, 5472 × 3648, 20.4 MP, 2.4 pix, 1", Gray, 14 fps, C - mount, Glass filter
<a href="#">COE-200-C-USB-070-IR-C</a>	HR Area Scan camera IMX183, CMOS, Rolling shutter, 5472 × 3648, 20.4 MP, 2.4 pix, 1", Color, 14 fps, C - mount, Infrared cut filter