



# TCDP4X096

Double magnification bi-telecentric lens, for detectors up to 2/3"

## SPECIFICATIONS

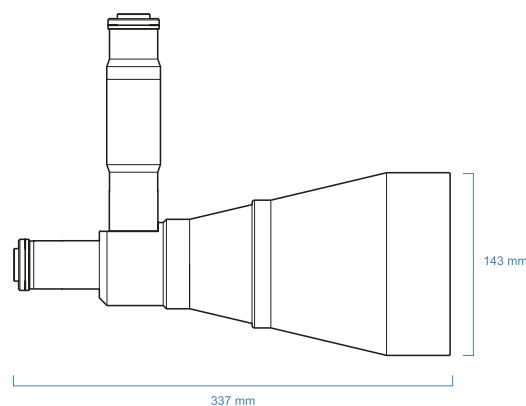
Magnification	(x)	0.093	<b>0.374</b>
<b>Object field of view</b>		(mm x mm)	
with 1/3" detector (4.8 x 3.6 mm)		51.4 x 38.5	<b>12.8 x 9.63</b>
with 1/2.5" detector (5.70 x 4.28 mm)		61.0 x 45.8	<b>15.3 x 11.4</b>
with 1/2" detector (6.4 x 4.8 mm)		68.5 x 51.4	<b>17.1 x 12.8</b>
with 1/1.8" detector (7.13 x 5.37 mm)		76.3 x 57.5	<b>19.1 x 14.4</b>
with 2/3" - 5 MP detector (8.45 x 7.07 mm)		90.4 x 75.6	<b>22.6 x 18.9</b>

## Optical specifications

Working distance	(mm)	278.6	...
wF/# (1)		8	<b>12</b>
Telecentricity (2)	(deg)	< 0.06 (0.08)	<b>&lt; 0.06 (0.10)</b>
Distortion , typical (max)	(%)	< 0.04 (0.08)	<b>&lt; 0.07 (0.10)</b>
Field depth (3)	(mm)	77	<b>7</b>
CTF @ 70 lp/mm	(%)	> 30	<b>&gt; 40</b>

## Mechanical specifications

Length	(mm)	337.0	...
Diameter (Width )	(mm)	143	<b>(264)</b>
Mass	(g)	3702	...
Mount		C	...



## NOTES

1. Working F-number (wF/#): the real F/# of a lens when used as a macro.
2. Maximum slope of principal rays inside the lens: when converted to milliradians, it gives the maximum measurement error for any millimeter of object displacement
3. 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.

## COMPATIBLE PRODUCTS



<b>LTCLHP096-G</b>	Telecentric HP illuminator, beam diameter 120 mm, green
<b>LTCLHP096-R</b>	Telecentric HP illuminator, beam diameter 120 mm, red
<b>LTCLHP096-B</b>	Telecentric HP illuminator, beam diameter 120 mm, blue
<b>LTCLHP096-W</b>	Telecentric HP illuminator, beam diameter 120 mm, white



<b>LTZZO170-75-3-W24V</b>	LED low angle ringlight, 3 LED rows, outer diameter 175 mm, 75°, white, 24V
<b>LTZZO170-75-3-R-24V</b>	LED low angle ringlight, 3 LED rows, outer diameter 175 mm, 75°, red, 24V
<b>LTZZO170-75-3-G-24V</b>	LED low angle ringlight, 3 LED rows, outer diameter 175 mm, 75°, green, 24V
<b>LTZZO170-75-3-B-24V</b>	LED low angle ringlight, 3 LED rows, outer diameter 175 mm, 75°, blue, 24V



<b>LTRN096RD</b>	Ring LED illuminator, inner diameter 143 mm, straight type, red 630 nm
<b>LTRN096GR</b>	Ring LED illuminator, inner diameter 143 mm, straight type, green 525 nm
<b>LTRN096BL</b>	Ring LED illuminator, inner diameter 143 mm, straight type, blue 470 nm
<b>LTRN096NW</b>	Ring LED illuminator, inner diameter 143 mm, straight type, white



<b>LTBC174174-W</b>	Continuous LED backlight, 174x174 illumination area, white
<b>LTBC174174-G</b>	Continuous LED backlight, 174x174 illumination area, green



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



<b>CMH0096</b>	Clamping mechanics for TCxx085, TCxx096 lenses and LTCLHP096-X illuminators
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