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**TECHSPEC® 0.274X In-Line Illumination CobaltTL Telecentric Lens**



#21-069: 0.274X In-Line Illumination CobaltTL Telecentric Lens



Stock **#21-069** **5 In Stock**

⊖ 1 ⊕ ₹1,85,137

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Qty 1+	₹1,85,137 each
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**General**

CobaltTL Series **Series:**

#63-233 Sold Separately **Stock No. of Mounting Clamp:**

Telecentric Lens **Type:**

In-Line Illumination **Type of Illumination:**

## Physical & Mechanical Properties

Variable	Iris Option:
226.50	Length (mm):
222.50	Length excluding Threads (mm):
81.80	Maximum Diameter (mm):
1230	Weight (g):
17.5	Flange Distance (mm):

## Optical Properties

51.39mm	Horizontal Field of View, 1.1" Sensor:
46.72mm	Horizontal Field of View, 1" Sensor:
32.12mm	Horizontal Field of View, 2/3" Sensor:
26.28mm	Horizontal Field of View, 1/1.8" Sensor:
23.36mm	Horizontal Field of View, 1/2" Sensor:
17.60	Maximum Image Circle (mm):
0.027	Numerical Aperture NA, Object Side:
10 (7)	Number of Elements (Groups):
<0.146	Typical Telecentricity @ 588nm (°):
<0.037	Typical Distortion @ 588nm (%):
0.274X	Primary Magnification PMAG:
0.27	Telecentric Lens Magnification:
110	Working Distance (mm):
51.39 x 38.54	FOV @ Max Sensor Format, H x V (mm):

f/4.5 - f/22	Aperture (f/#):
425 - 675nm BBAR	Coating:

±7.795mm at f/10 (20% @ 20 lp/mm)	Depth of Field (mm):
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0.274X	Magnification:
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VIS	Lens Wavelength Range:
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## Sensor

1.1"	Maximum Sensor Format:
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2.20	Pixel Size (µm):
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## Threading & Mounting

M77 x 0.75 (Female)	Filter Thread:
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C-Mount	Mount:
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## Regulatory Compliance

<a href="#">Compliant</a>	RoHS 2015:
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<a href="#">View</a>	Certificate of Conformance:
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<a href="#">Compliant</a>	Reach 233:
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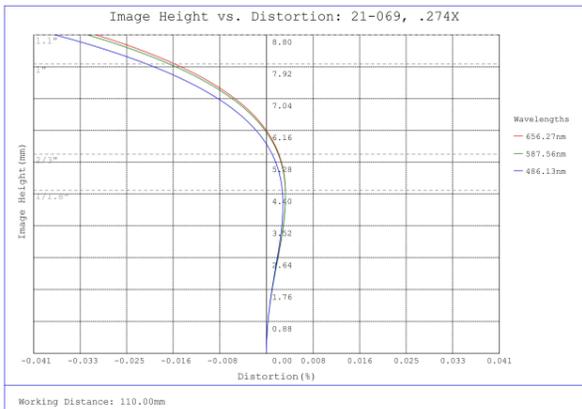
China  
**Country of Origin:**  
 Edmund Optics India Private Limited  
**Imported By:**

## Product Details

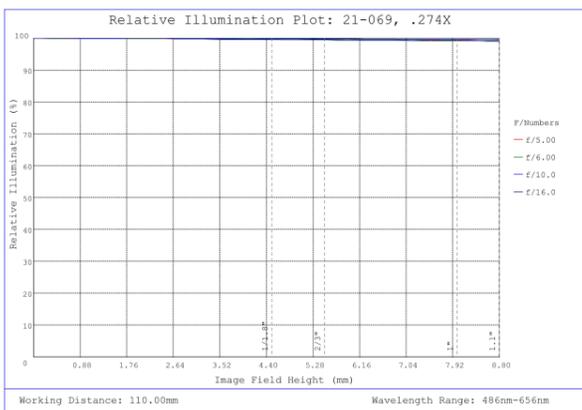
- High Resolution Bi-Telecentric Lens with In-Line Illumination Options
- Up to 20 MegaPixels, 2.2µm Pixel Size
- 1.1", C-Mount Telecentric Lens with  $f/\#$ s as Low as  $f/4$

TECHSPEC® CobaltTL Telecentric Lenses are designed for semiconductor and electronics inspection, measurement, and gauging applications. These telecentric lenses achieve high light throughput with industry leading low  $f/\#$ s. Featuring less than  $0.015^\circ$  telecentricity and low 0.013% distortion, these lenses are ideal for image stitching applications. These 17.6mm diagonal sensor format lenses are compatible with the Sony IMX304 1.1" sensors and other similar format sensors such as the Sony IMX183. TECHSPEC® CobaltTL Telecentric Lenses produce unparalleled levels of contrast yielding maximum image quality with the highest degree of measurement accuracy. In-line versions provide the ability to rotate/reposition the inline illumination port to allow for maximum flexibility when machine building. TECHSPEC® CobaltTL Telecentric Lenses are compatible with high vibration environments and feature a removable recessed set screw for securely locking the iris in place.

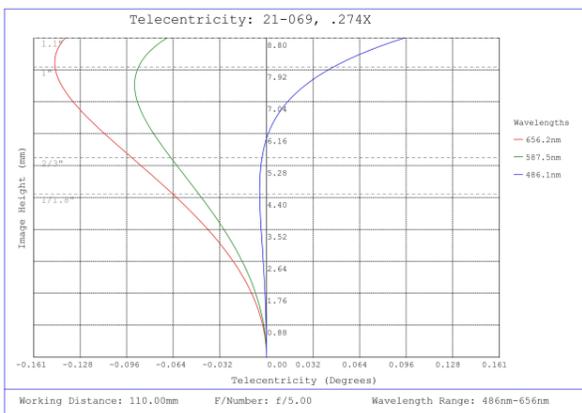
## Technical Information



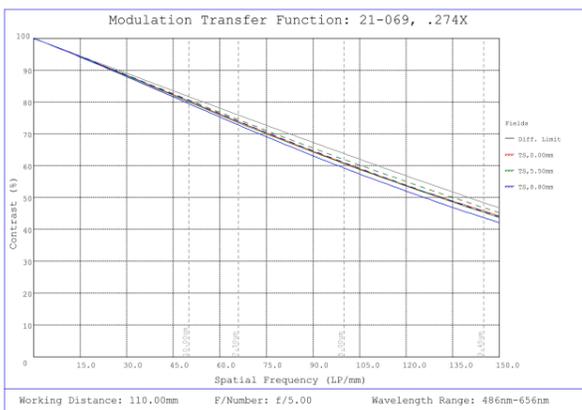
#21-069, 0.274X In-Line CobaltTL Telecentric Lens, Distortion Plot



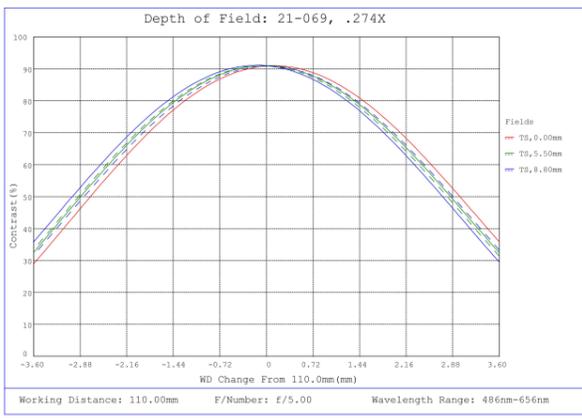
#21-069, 0.274X In-Line CobaltTL Telecentric Lens, Relative Illumination Plot



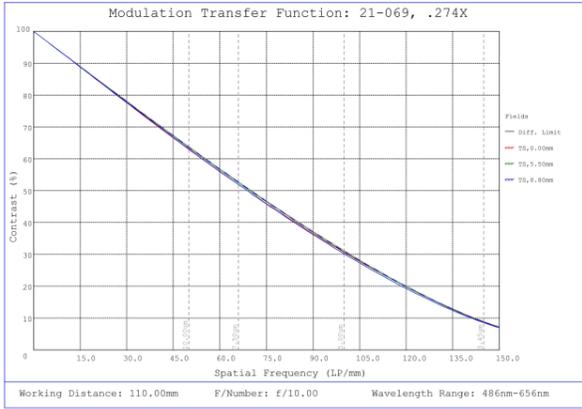
#21-069, 0.274X In-Line CobaltTL Telecentric Lens, Telecentricity Plot



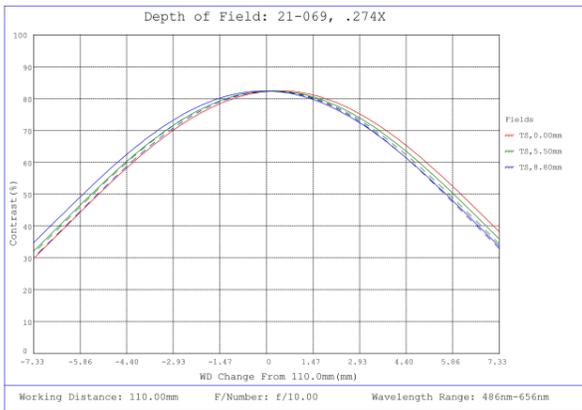
#21-069, 0.274X In-Line CobaltTL Telecentric Lens, Modulated Transfer Function (MTF) Plot, 110mm Working Distance,  $f/5$



#21-069, 0.274X In-Line CobaltTL Telecentric Lens, Depth of Field Plot, 110mm Working Distance, f5



#21-069, 0.274X In-Line CobaltTL Telecentric Lens, Modulated Transfer Function (MTF) Plot, 110mm Working Distance, f10



#21-069, 0.274X In-Line CobaltTL Telecentric Lens, Depth of Field Plot, 110mm Working Distance, f10

Description		Stock No.	Length (A)	Front Diameter (B)	Back Diameter (C)
0.28X	C-Mount	#62-921	197.59mm	138.6mm	50mm
0.36X	C-Mount	#88-602	163.5mm	70mm	43.5mm
0.5X	C-Mount	#62-911	172.9mm	90mm	50mm
0.55X	C-Mount	#88-603	182.5mm	62mm	43.5mm
0.69X	C-Mount	#15-872 / #15-873 (In-Line)	174.96mm	55mm	46mm
0.9X	C-Mount	#62-901	199.8mm	65mm	53mm