

**TECHSPEC® 50mm, f/2.0 Ci Series Fixed Focal Length Lens**

50mm Focal Length

Stock #86-614 **20+ In Stock**   **A\$297<sup>.00</sup>****ADD TO CART**

Volume Pricing	
Qty 1-24	A\$297.00 each
Qty 25+	A\$268.00 each
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**SPECIFICATIONS****General**

Series:

Ci Series

Type:

Fixed Focal Length Lens

**Imaging Lens Type:**  
Compact Lens with Fixed Aperture

## Physical & Mechanical Properties

Fixed	<b>Iris Option:</b>
49.50	<b>Length (mm):</b>
30.5	<b>Maximum Diameter (mm):</b>
30.5	<b>Outer Diameter (mm):</b>
63	<b>Weight (g):</b>
2.06	<b>Maximum Rear Protrusion (mm):</b>
26.50	<b>Diameter (mm):</b>

## Optical Properties

42.8mm - 10.0°	<b>Horizontal Field of View @ Max Sensor Format:</b>
Horizontal: 42.8mm - 10° Vertical: 32mm - 7.5° Diagonal: 53.5mm - 12.5°	<b>Field of View at Max Sensor Format:</b>
42.8mm - 10.0°	<b>Horizontal Field of View, 2/3" Sensor:</b>
35.0mm - 8.2°	<b>Horizontal Field of View, 1/1.8" Sensor:</b>
31.1mm - 7.3°	<b>Horizontal Field of View, 1/2" Sensor:</b>
28.2mm - 6.6°	<b>Horizontal Field of View, 1/2.5" Sensor:</b>
23.3mm - 5.5°	<b>Horizontal Field of View, 1/3" Sensor:</b>
17.5mm - 4.1°	<b>Horizontal Field of View, 1/4" Sensor:</b>
11.00	<b>Maximum Image Circle (mm):</b>
0.0434	<b>Numerical Aperture NA, Object Side:</b>
6 (4)	<b>Number of Elements (Groups):</b>
50.00	<b>Focal Length FL (mm):</b>
250 - ∞	<b>Working Distance (mm):</b>
f/2	<b>Aperture (f#):</b>
425 - 675nm BBAR	<b>Coating:</b>
425 - 675nm BBAR	<b>Coating Specification:</b>
35.62	<b>Entrance Pupil Position (mm):</b>
39.89	<b>Object Space Principal Plane (mm):</b>
-36.26	<b>Image Space Principal Plane (mm):</b>
0.26	<b>Maximum Distortion (%):</b>
-40.93	<b>Exit Pupil Position (mm):</b>
VS	<b>Lens Wavelength Range:</b>

## Sensor

2/3"	<b>Maximum Sensor Format:</b>
2.74	<b>Pixel Size (μm):</b>

## Threading & Mounting

	<b>Filter Thread:</b>
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M80.5 x 0.50 (Female)

Filter Thread Adapter:  
[#89-943 \(Required\)](#)

Front Thread:  
M80.5 x 0.5 (Male)

Mount:  
C-Mount

## Environmental & Durability Factors

Storage Temperature (°C):  
[-20 to +60](#)

Type of Ruggedization:  
Industrial (Fixed Aperture with Simplified Mechanics)

## Regulatory Compliance

RoHS 2015:  
[Compliant](#)

REACH 201:  
[Compliant](#)

Certificate of Conformance:  
[View](#)

## PRODUCT DETAILS

These compact lenses are designed specifically for volume integration into applications such as analytical medical devices, including benchtop-based blood analyzers. For customized f/# versions to best suit your instrumentation application needs and to discuss volume requirements, please [contact us](#).

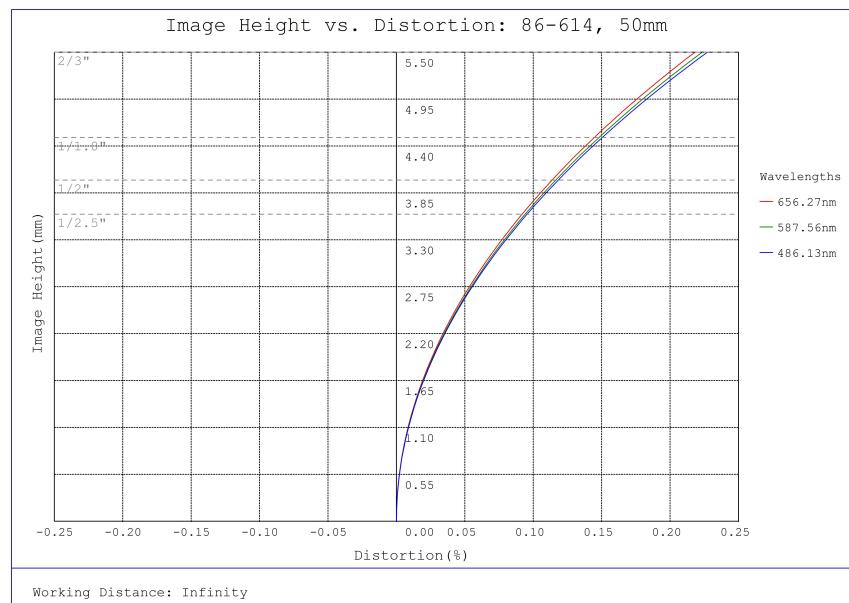
- Up to 2/3", C-Mount Lens
- Up to 7.5 MegaPixels, 2.8µm Pixel Size Sensors
- Instrumentation (Ci) Versions of our C Series Lenses with Streamlined Mechanical Designs and Fixed Apertures
- 3.5mm to 50mm Focal Length
- [Ruggedized \(Cr\) Designs](#) Also Available

TECHSPEC® Ci Series Fixed Focal Length Lenses are a streamlined version of our C Series Fixed Focal Length Lenses. They feature the same low lens-to-lens variation and broadband anti-reflection (BBAR) coating for maximum light transmission, while offering reduced weight and size. An adjustable, lockable focus allows for setting and locking the best focus position for instrumentation integration. TECHSPEC® Ci Series Fixed Focal Length Lenses are designed specifically for volume integration into applications such as factory inspection and automation to benchtop biomedical devices. The Ci Series offers a wide range of aperture options, ensuring maximum flexibility of resolution, throughput, and depth of field.

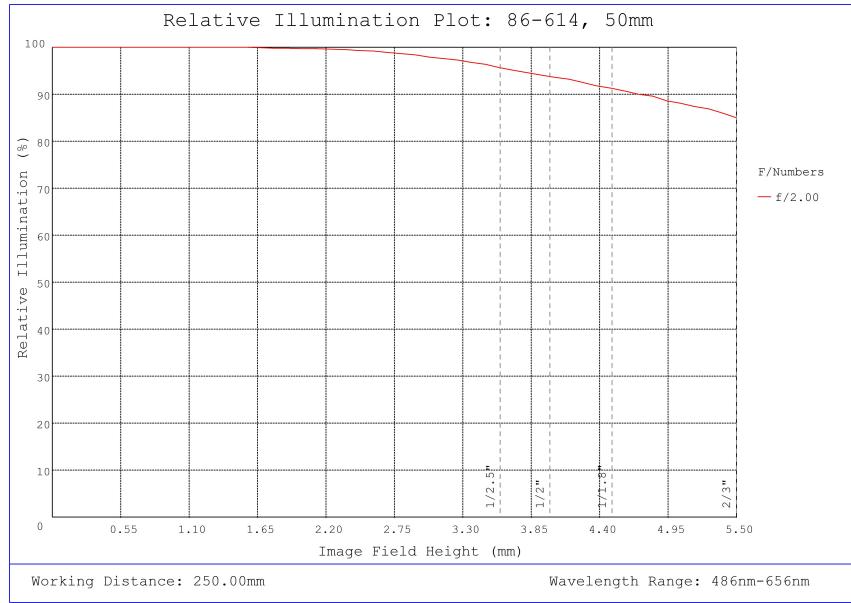
Edmund Optics has created a family of high performance optical designs (the C Series family) and developed 6 customized optomechanical solutions targeted for specific applications. These lens sub-families utilize the same optics as the C Series lenses providing the same optical performance in a variety of optomechanical solutions to meet your application requirements:

- C Series:** Features locking cam focus and iris adjustment and is the most adjustable version of these optical designs; they are the typical high quality machine vision lenses. Also available with a [VIS-NIR Broadband Anti-Reflection \(BBAR\) Coating](#).
- Ci Series: Simplified mechanics featuring fixed apertures with compact housing. [Industrial Ruggedization](#) for reduced size, cost, and locked focus.
- Cr Series:** All optics glued in place and a locking C-clamp focus ring. [Stabilized Ruggedization](#) for reduced pixel shift and improved focus stability.
- Cx Series:** Modular, flexible mechanics allows lenses to be taken apart for easy integration of accessories such as liquid lenses, apertures, and more.
- Liquid Lens Cx Series:** Designed with an integrated liquid lens for quick autofocus.
- Cw Series:** Waterproof, designed to meet IEC [Ingress Protection](#) Code IPX7 and IPX9K.

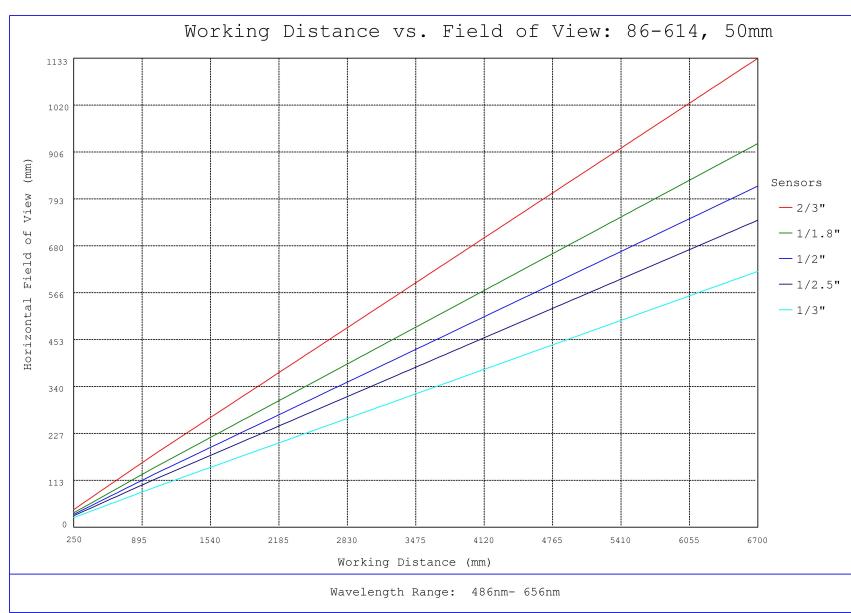
## TECHNICAL INFORMATION



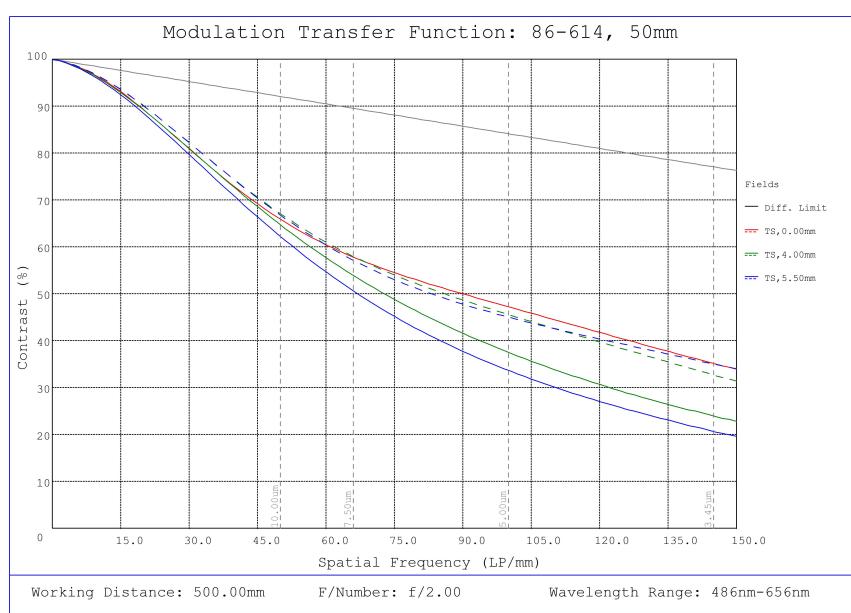
#86-614, 50mm, f/2.0 Ci Series Fixed Focal Length Lens, Distortion Plot



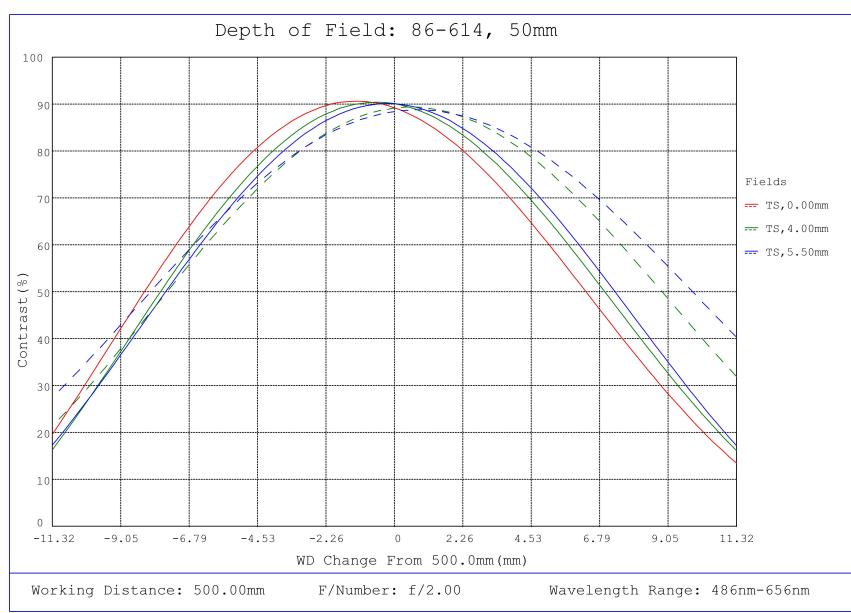
#86-614, 50mm, f/2.0 Ci Series Fixed Focal Length Lens, Relative Illumination Plot



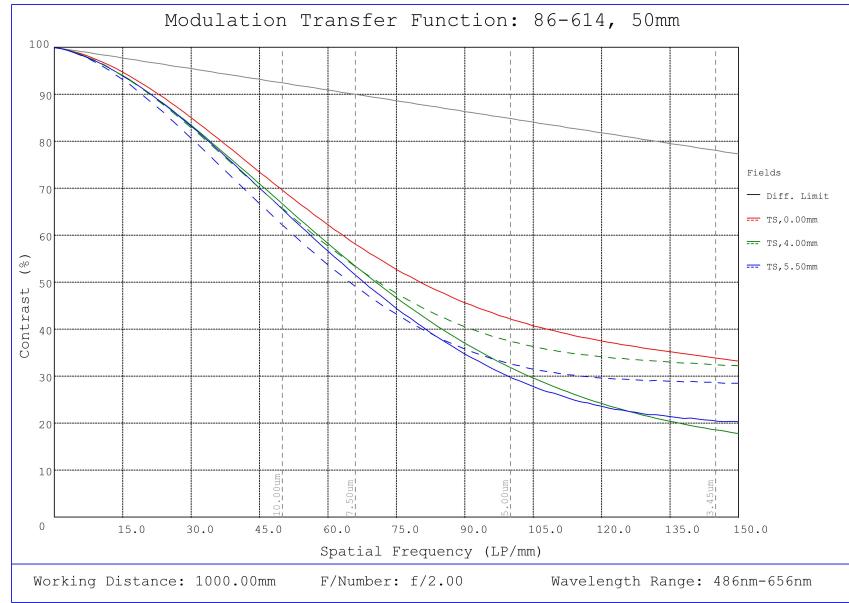
#86-614, 50mm, f/2.0 Ci Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



#86-614, 50mm, f/2.0 Ci Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 500mm Working Distance, f2



#86-614, 50mm, f/2.0 Ci Series Fixed Focal Length Lens, Depth of Field Plot, 500mm Working Distance, f2



#86-614, 50mm, f/2.0 Ci Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 1000mm Working Distance, f2



#86-614, 50mm, f/2.0 Ci Series Fixed Focal Length Lens, Depth of Field Plot, 1000mm Working Distance, f2

Focal Length	A	B	C	D
6mm	M34.0 x 0.5	47.8mm	34mm	1.17mm
12mm	M22.0 x 0.75	29.0mm	22mm	0.96mm
16mm	M22.0 x 0.75	40.8mm	22mm	1.09mm
25mm	M22.0 x 0.75	29.9mm	22mm	1.33mm
35mm	M25.5 x 0.5	41mm	22.5mm	3.82mm
50mm	M30.5 x 0.5	49.5mm	30.5mm	2.06mm

Focus Locking Screw

Max. Overall Length (B)

4.5mm

Max. Front Diameter (Q)

Front Threading (A)

Max. Rear Protrusion (D)

26mm

C-Mount

M22.0 x 0.75

## COMPATIBLE CAMERAS