

**TECHSPEC® 4.5mm, f/2 Ci Series Fixed Focal Length Lens**



4.5mm Focal Length

Stock #87-551 **20+ In Stock**

⊖ 1 ⊕ £283<sup>00</sup>

**ADD TO CART**

Volume Pricing	
Qty 1-24	£283.00 each
Qty 25+	£255.00 each
Need More?	<a href="#">Request Quote</a>

ⓘ Prices shown are exclusive of VAT/local taxes

Product Downloads

**General**

**Product Family:**  
Ci Series

**Type:**  
Fixed Focal Length Lens

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

**Physical & Mechanical Properties**

Fixed	<b>Iris Option:</b>
32.14	<b>Length (mm):</b>
40	<b>Maximum Diameter (mm):</b>
40	<b>Outer Diameter (mm):</b>
66	<b>Weight (g):</b>
3.4	<b>Maximum Rear Protrusion (mm):</b>
26.50	<b>Diameter (mm):</b>

## Optical Properties

72.0mm - 84.7°	<b>Horizontal Field of View @ Max Sensor Format:</b>
Horizontal: 72mm - 84.8° Vertical: 50.5mm - 66.1° Diagonal: 98.2mm - 100.1°	<b>Field of View at Max Sensor Format:</b>
72.0mm - 84.7°	<b>Horizontal Field of View, 1/1.8" Sensor:</b>
53.9mm - 69.4°	<b>Horizontal Field of View, 1/2" Sensor:</b>
44.0mm - 59.2°	<b>Horizontal Field of View, 1/3" Sensor:</b>
32.0mm - 45.2°	<b>Horizontal Field of View, 1/4" Sensor:</b>
9.00	<b>Maximum Image Circle (mm):</b>
0.0285	<b>Numerical Aperture NA, Object Side:</b>
7 (6)	<b>Number of Elements (Groups):</b>
4.50	<b>Focal Length FL (mm):</b>
25 - ∞	<b>Working Distance (mm):</b>
f/2	<b>Aperture (f/#):</b>
425 - 675nm BBAR	<b>Coating:</b>
425 - 675nm BBAR	<b>Coating Specification:</b>
14.4	<b>Entrance Pupil Position (mm):</b>
17.89	<b>Object Space Principal Plane (mm):</b>
6.51	<b>Image Space Principal Plane (mm):</b>
-15.83	<b>Maximum Distortion (%):</b>
-9	<b>Exit Pupil Position (mm):</b>
VIS	<b>Lens Wavelength Range:</b>

## Sensor

1/1.8"	<b>Maximum Sensor Format:</b>
2.74	<b>Pixel Size (µm):</b>

## Threading & Mounting

M58 x 0.75 (Male)	<b>Filter Thread:</b>
<a href="#">#87-425 (Required)</a>	<b>Filter Thread Adapter:</b>
M40.0 x 0.5 (Male)	<b>Front Thread:</b>
C-Mount	<b>Mount:</b>

## Environmental & Durability Factors

Storage Temperature (°C):

-20 to +60

Type of Ruggedization:

Industrial (Fixed Aperture with Simplified Mechanics)

## Regulatory Compliance

Certificate of Conformance:

[View](#)

## Product Details

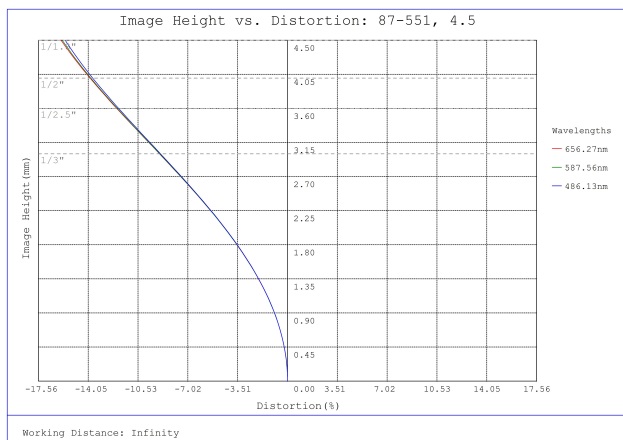
- Up to 2/3", C-Mount Lens
- Up to 7.5 MegaPixels, 2.8µm Pixel Size Sensors
- Instrumentation (Ci) Versions of our C Series Lenses with Streamlined Mechanical Designs and Fixed Apertures
- 3.5mm to 50mm Focal Length
- [Ruggedized \(Cr\) Designs](#) Also Available

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.

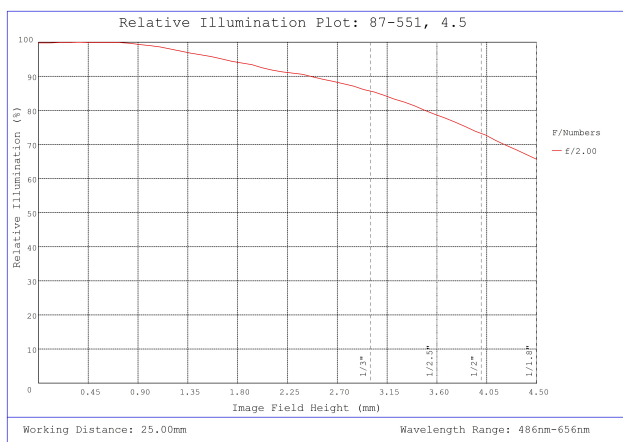
Edmund Optics has created a family of high performance optical designs (the C Series family) and developed 6 customized optomechanical solutions targeted for specific applications. These lens sub-families utilize the same optics as the C Series lenses providing the same optical performance in a variety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

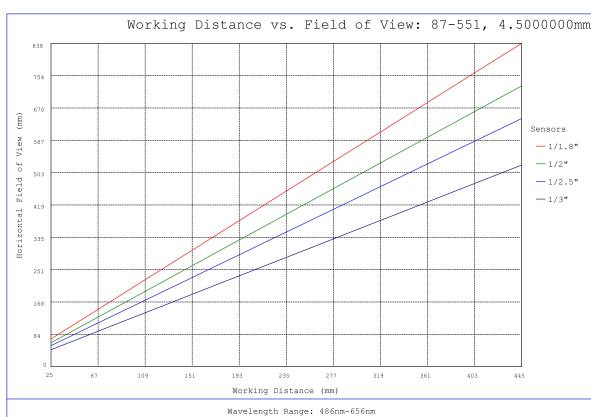
## Technical Information



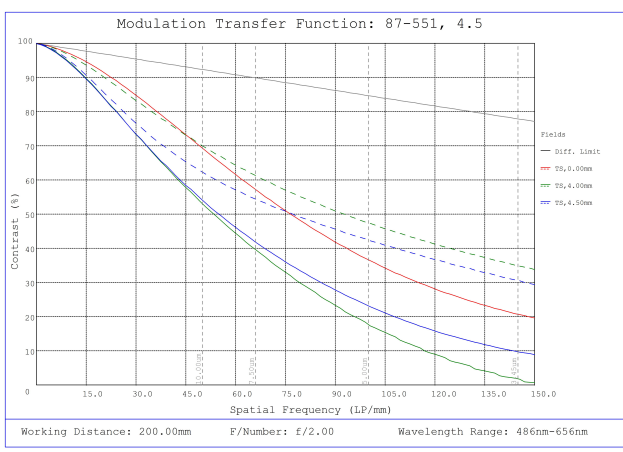
#87-551, 4.5mm, f/2 Ci Series Fixed Focal Length Lens, Distortion Plot



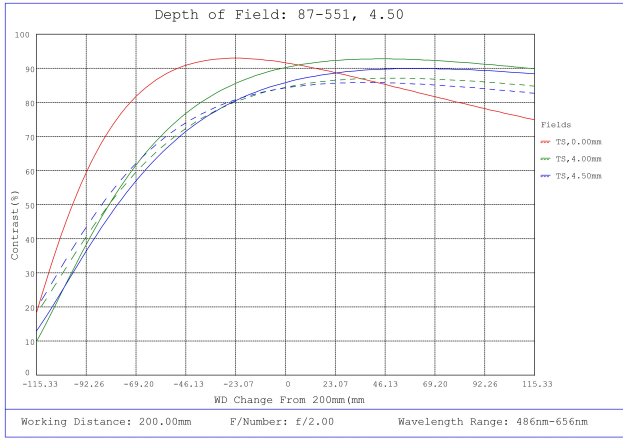
#87-551, 4.5mm, f/2 Ci Series Fixed Focal Length Lens, Relative Illumination Plot



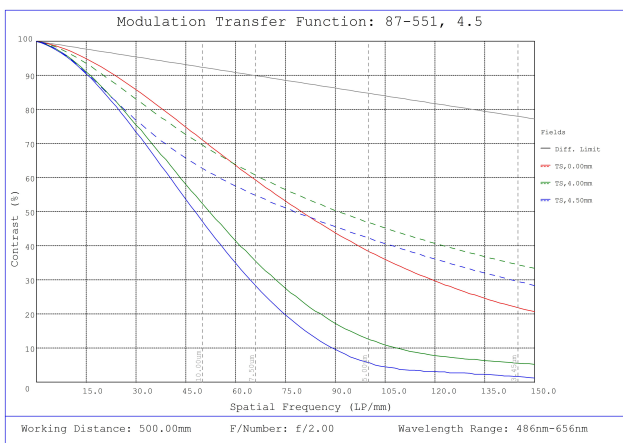
#87-551, 4.5mm, f/2 Ci Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



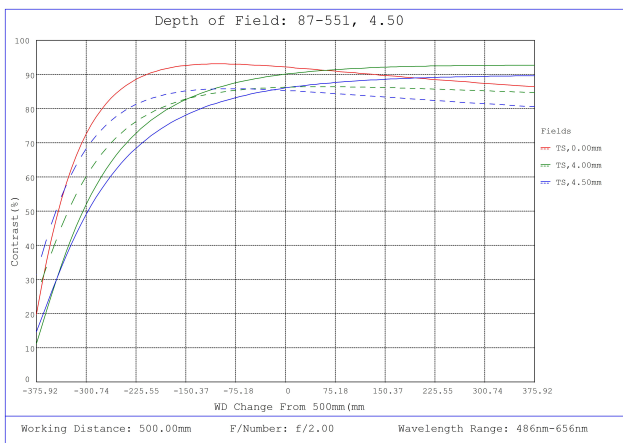
#87-551, 4.5mm, f/2 Ci Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 200mm Working Distance, f2



#87-551, 4.5mm, f/2 Ci Series Fixed Focal Length Lens, Depth of Field Plot, 200mm Working Distance, f2



#87-551, 4.5mm, f/2 Ci Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 500mm Working Distance, f2



#87-551, 4.5mm, f/2 Ci Series Fixed Focal Length Lens, Depth of Field Plot, 500mm 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



## Compatible Cameras

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