

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



4.5mm Focal Length

Stock #87-551 1 In Stock

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1

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₹21,968

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General	
Ci Series	Series:
Fixed Focal Length Lens	Type:
Compact Lens with Fixed Aperture	Imaging Lens Type:
Physical & Mechanical Properties	
Fixed	Iris Option:

32.14	Length (mm):
40	Maximum Diameter (mm):
40	Outer Diameter (mm):
66	Weight (g):
3.4	Maximum Rear Protrusion (mm):

26.50	Diameter (mm):
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Optical Properties

Horizontal Field of View @ Max Sensor Format: 72.0mm - 84.7°
Field of View at Max Sensor Format: Horizontal: 72mm - 84.8° Vertical: 50.5mm - 66.1° Diagonal: 98.2mm - 100.1°

Horizontal Field of View, 1/1.8" Sensor: 72.0mm - 84.7°
Horizontal Field of View, 1/2" Sensor: 53.9mm - 69.4°

Horizontal Field of View, 1/3" Sensor: 44.0mm - 59.2°
Horizontal Field of View, 1/4" Sensor: 32.0mm - 45.2°

Maximum Image Circle (mm): 9.00
Numerical Aperture NA, Object Side: 0.0285

Number of Elements (Groups): 7 (6)
Focal Length FL (mm): 4.50

Working Distance (mm): 25 - ∞
Aperture (f/#): f/2

Coating: 425 - 675nm BBAR
Coating Specification: 425 - 675nm BBAR

Entrance Pupil Position (mm): 14.4
Object Space Principal Plane (mm): 17.89

Image Space Principal Plane (mm): 6.51
Maximum Distortion (%): -15.83

Exit Pupil Position (mm): -9
Lens Wavelength Range: VIS

Sensor

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

Threading & Mounting

Filter Thread: M58 x0.75 (Male)
Filter Thread Adapter: #87-425 (Required)

Front Thread: M40.0 x0.5 (Male)
Mount: C-Mount

Environmental & Durability Factors

Storage Temperature (°C):

-20 to +60

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

Regulatory Compliance

Certificate of Conformance:
[View](#)

Country of Origin:
China

Imported By:
Edmund Optics India Private Limited

Product Details

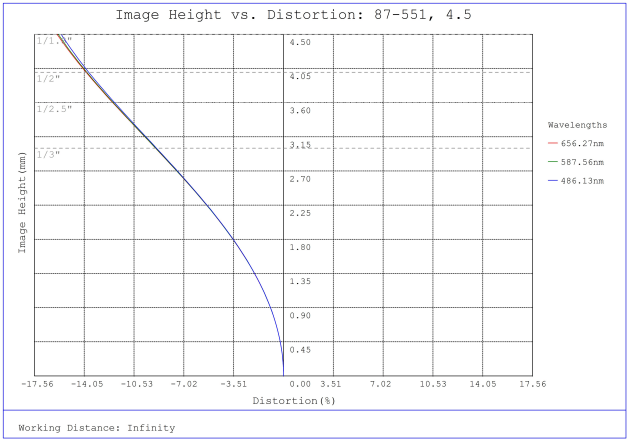
- Up to 2/3", C-Mount Lens
- Up to 7.5 MegaPixels, 2.8µm Pixel Size Sensors
- Instrumentation (Ci) Versions of our C Series Lenses with Streamlined Mechanical Designs and Fixed Apertures
- 3.5mm to 50mm Focal Length
- [Ruggedized \(Cr\) Designs](#) Also Available

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.

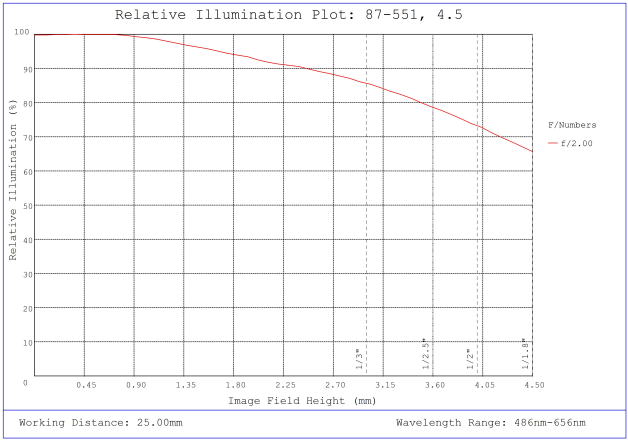
Edmund Optics has created a family of high performance optical designs (the C Series family) and developed 6 customized optomechanical solutions targeted for specific applications. These lens sub-families utilize the same optics as the C Series lenses providing the same optical performance in a variety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

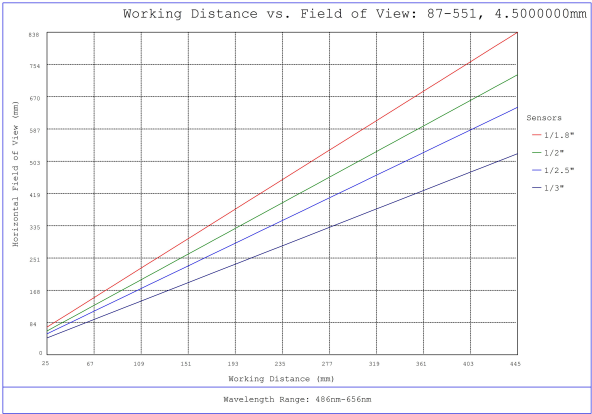
Technical Information



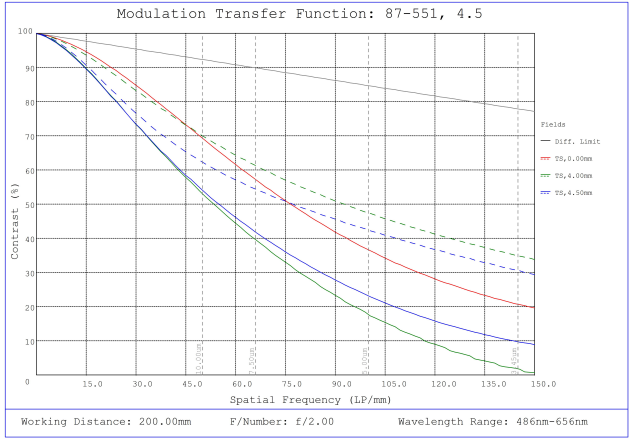
#87-551, 4.5mm, f/2 Ci Series Fixed Focal Length Lens, Distortion Plot



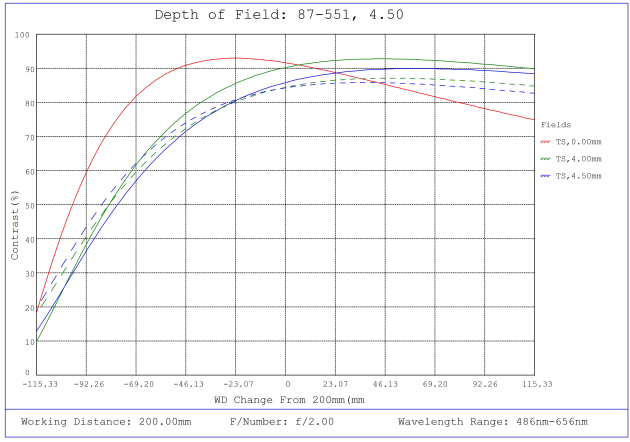
#87-551, 4.5mm, f/2 Ci Series Fixed Focal Length Lens, Relative Illumination Plot



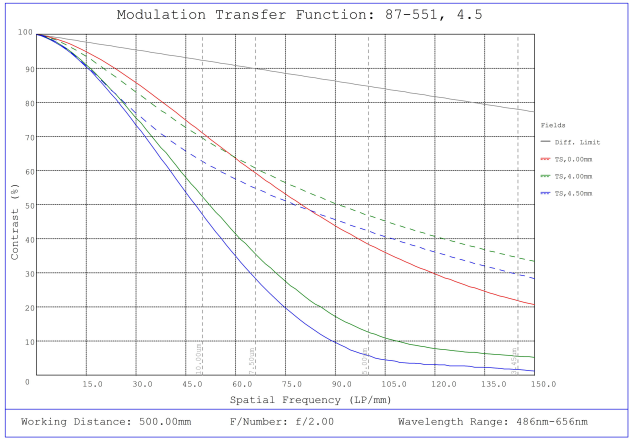
#87-551, 4.5mm, f/2 Ci Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



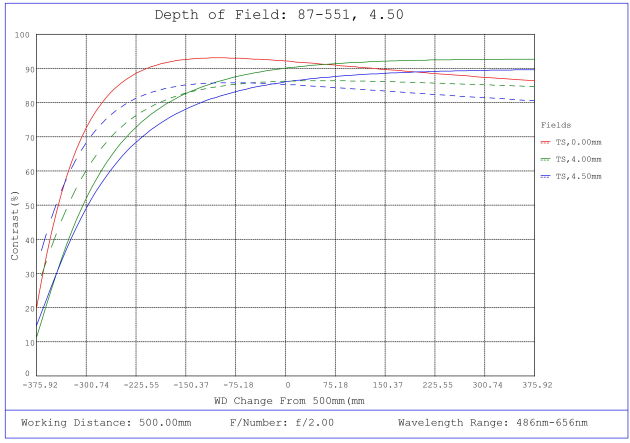
#87-551, 4.5mm, f/2 Ci Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 200mm Working Distance, f2



#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
