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



4.5mm Focal Length

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

⊖ 1 ⊕ **\$332.00**

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Volume Pricing	
Qty 1-24	\$332.00 each
Qty 25+	\$299.00 each
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General

Ci Series **Product Family:**

Fixed Focal Length Lens **Type:**

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

Physical & Mechanical Properties

Iris Option:

Fixed

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):

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°

9.00 Maximum Image Circle (mm):

0.0285 Numerical Aperture NA, Object Side:

7 (6) Number of Elements (Groups):

4.50 Focal Length FL (mm):

25 - ∞ Working Distance (mm):

f/2 Aperture (f/#):

425 - 675nm BBAR Coating:

425 - 675nm BBAR Coating Specification:

14.4 Entrance Pupil Position (mm):

17.89 Object Space Principal Plane (mm):

6.51 Image Space Principal Plane (mm):

-15.83 Maximum Distortion (%):

-9 Exit Pupil Position (mm):

VIS Lens Wavelength Range:

Sensor

1/1.8" Maximum Sensor Format:

2.74 Pixel Size (µm):

Threading & Mounting

M58 x 0.75 (Male) Filter Thread:

#87-425 (Required) Filter Thread Adapter:

M40.0 x 0.5 (Male) Front Thread:

C-Mount 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](#)

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.

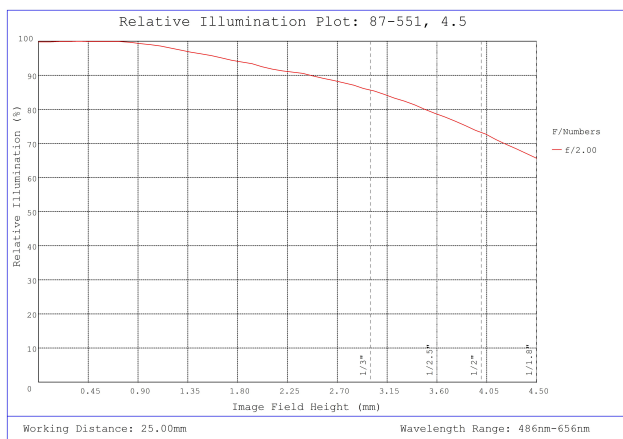
Edmund Optics has created a family of high performance optical designs (the C Series family) and developed 6 customized optomechanical solutions targeted for specific applications. These lens sub-families utilize the same optics as the C Series lenses providing the same optical performance in a variety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

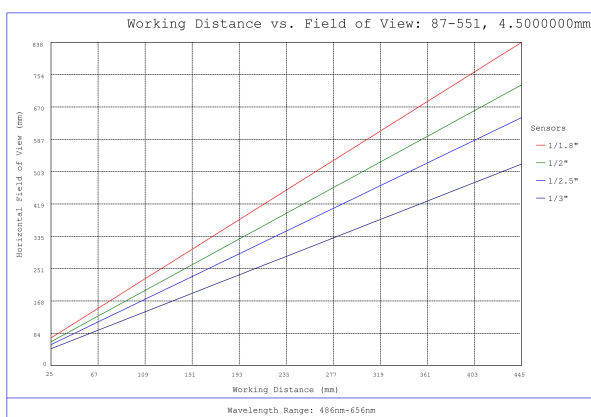
Technical Information



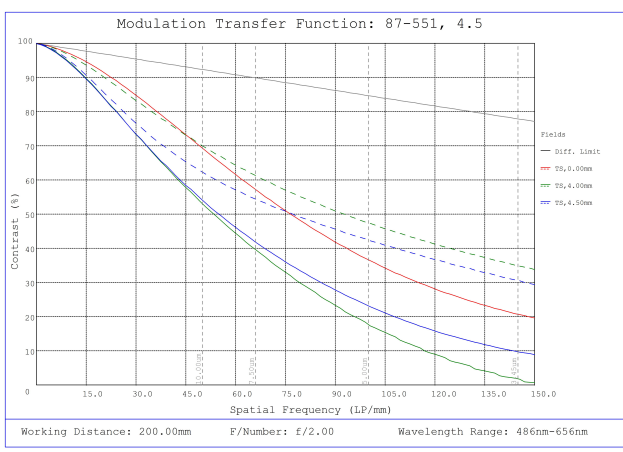
#87-551, 4.5mm, f/2 Ci Series Fixed Focal Length Lens, Distortion Plot



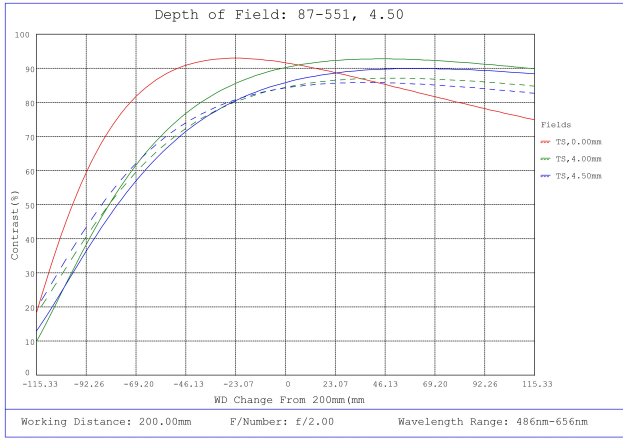
#87-551, 4.5mm, f/2 Ci Series Fixed Focal Length Lens, Relative Illumination Plot



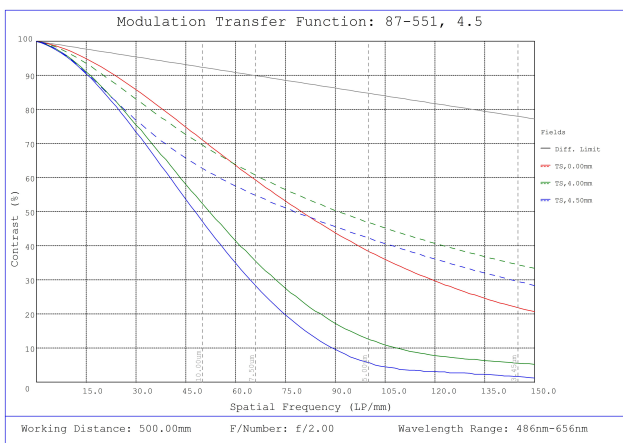
#87-551, 4.5mm, f/2 Ci Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



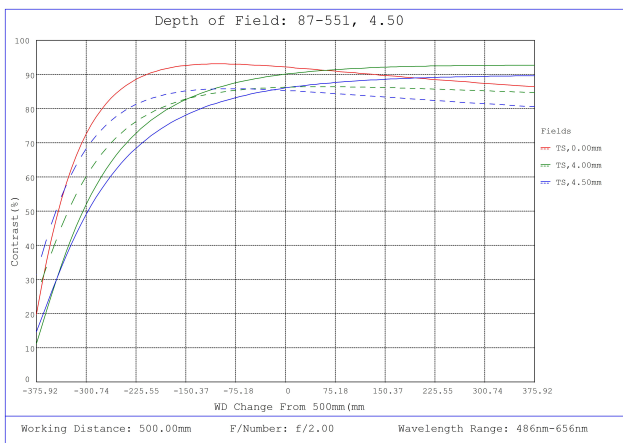
#87-551, 4.5mm, f/2 Ci Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 200mm Working Distance, f2



#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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