

TECHSPEC® 4.5mm, f/4 Ci Series Fixed Focal Length Lens



4.5mm Focal Length

Stock **#87-553** **3 In Stock**

- 1 + C\$812⁰⁰

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Volume Pricing	
Qty 1-24	C\$812.00 each
Qty 25+	C\$735.00 each
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General

Ci Series **Product Family:**
Fixed Focal Length Lens **Type:**

Physical & Mechanical Properties

Fixed **Iris Option:**
Length (mm):

32.14

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 - 84.7°
Vertical: 50.5mm - 66.1°
Diagonal: 98.3mm - 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):**

0.0143 **Numerical Aperture NA, Object Side:**

7 (6) **Number of Elements (Groups):**

4.50 **Focal Length FL (mm):**

25 - ∞ **Working Distance (mm):**

f/4 **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):**

VS **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):

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

Regulatory Compliance

Certificate of Conformance:

[View](#)

Product Details

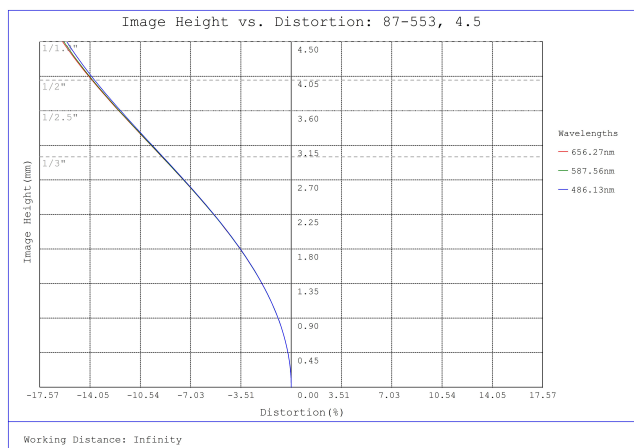
- Up to 2/3", C-Mount Lens
- Up to 7.5 MegaPixels, 2.8µm Pixel Size Sensors
- Instrumentation (Ci) Versions of our C Series Lenses with Streamlined Mechanical Designs and Fixed Apertures
- 3.5mm to 50mm Focal Length
- **Ruggedized (Cr) Designs** Also Available

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.

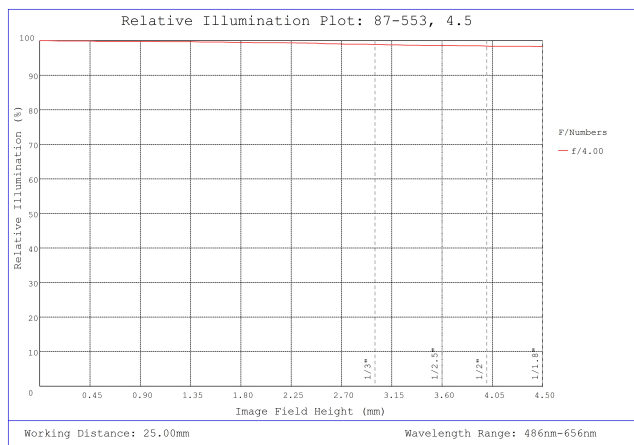
Edmund Optics has created a family of high performance optical designs (the C Series family) and developed 6 customized optomechanical solutions targeted for specific applications. These lens sub-families utilize the same optics as the C Series lenses providing the same optical performance in a variety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

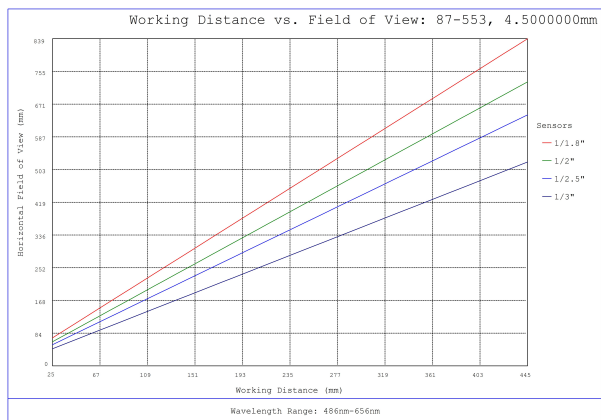
Technical Information



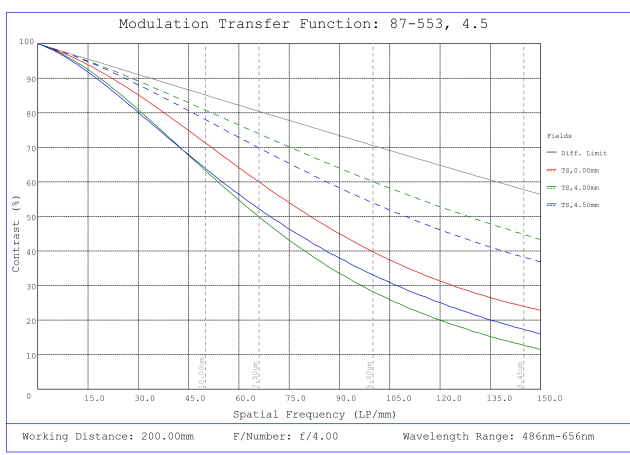
#87-553, 4.5mm, f/4 Ci Series Fixed Focal Length Lens, Distortion Plot



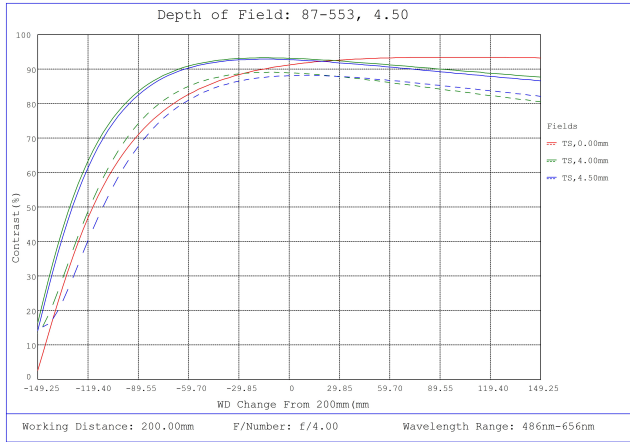
#87-553, 4.5mm, f/4 Ci Series Fixed Focal Length Lens, Relative Illumination Plot



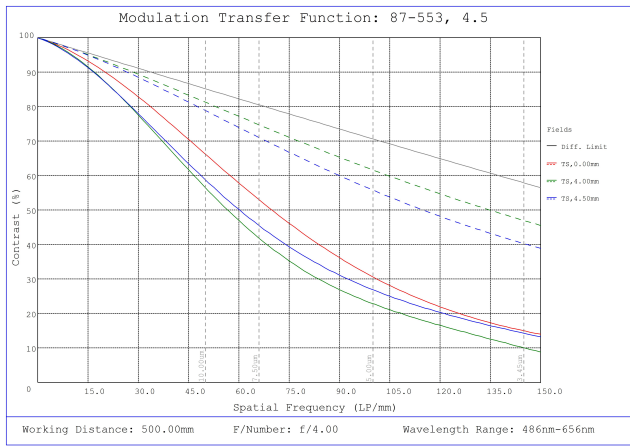
#87-553, 4.5mm, f/4 Ci Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



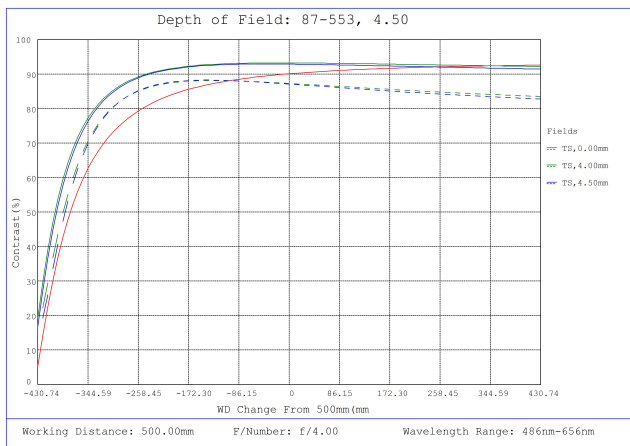
#87-553, 4.5mm, f/4 Ci Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 200mm Working Distance, f4



#87-553, 4.5mm, f/4 Ci Series Fixed Focal Length Lens, Depth of Field Plot, 200mm Working Distance, f4



#87-553, 4.5mm, f/4 Ci Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 500mm Working Distance, f4



#87-553, 4.5mm, f/4 Ci Series Fixed Focal Length Lens, Depth of Field Plot, 500mm Working Distance, f4

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