

TECHSPEC® 8.5mm, f/1.3 Ci Series Fixed Focal Length Lens



8.5mm Focal Length

Stock #86-599 **20+ In Stock**

⊖ 1 ⊕ C\$491⁰⁰

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Volume Pricing

Qty 1-24	C\$491.40 each
Qty 25+	C\$442.40 each
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Product Downloads

General

Ci Series **Product Family:**

Fixed Focal Length Lens **Type:**

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

Physical & Mechanical Properties

Iris Option:

Fixed	
33.98	Length (mm):
26.5	Maximum Diameter (mm):
26.5	Outer Diameter (mm):
34	Weight (g):
0.6	Maximum Rear Protrusion (mm):
26.50	Diameter (mm):

Optical Properties

128.6mm - 60.6°	Horizontal Field of View @ Max Sensor Format:
Horizontal: 124.9mm - 60.7° Vertical: 88.9mm - 45° Diagonal: 169.4mm - 77°	Field of View at Max Sensor Format:
128.6mm - 60.6°	Horizontal Field of View, 2/3" Sensor:
101.0mm - 49.2°	Horizontal Field of View, 1/1.8" Sensor:
88.3mm - 43.6°	Horizontal Field of View, 1/2" Sensor:
79.2mm - 39.5°	Horizontal Field of View, 1/2.5" Sensor:
64.6mm - 32.6°	Horizontal Field of View, 1/3" Sensor:
47.8mm - 24.4°	Horizontal Field of View, 1/4" Sensor:
11.00	Maximum Image Circle (mm):
0.0295	Numerical Aperture NA, Object Side:
7 (5)	Number of Elements (Groups):
8.50	Focal Length FL (mm):
100 - ∞	Working Distance (mm):
f/1.3	Aperture (f/#):
425 - 675nm BBAR	Coating:
425 - 675nm BBAR	Coating Specification:
8.22	Entrance Pupil Position (mm):
14.08	Object Space Principal Plane (mm):
6.67	Image Space Principal Plane (mm):
-18.51	Maximum Distortion (%):
-12.23	Exit Pupil Position (mm):
VIS	Lens Wavelength Range:

Sensor

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

Threading & Mounting

M30.5 x 0.50 (Male)	Filter Thread:
#89-932 (Required)	Filter Thread Adapter:
M22.0 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

RoHS 2015:
Compliant

REACH 201:
Compliant

Certificate of Conformance:
[View](#)

Product Details

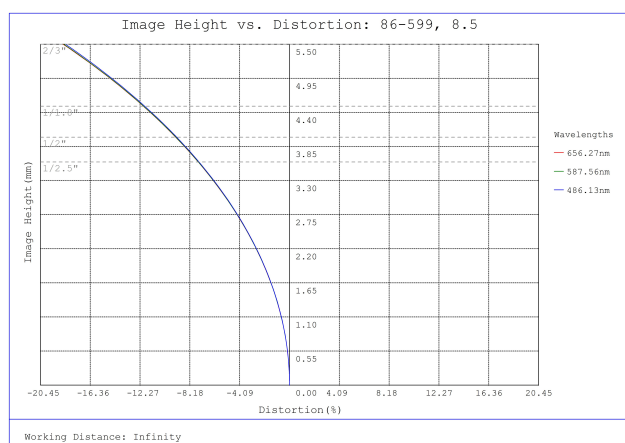
- Up to 2/3", C-Mount Lens
- Up to 7.5 MegaPixels, 2.8µm Pixel Size Sensors
- Instrumentation (Ci) Versions of our C Series Lenses with Streamlined Mechanical Designs and Fixed Apertures
- 3.5mm to 50mm Focal Length
- **Ruggedized (Cr) Designs** Also Available

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.

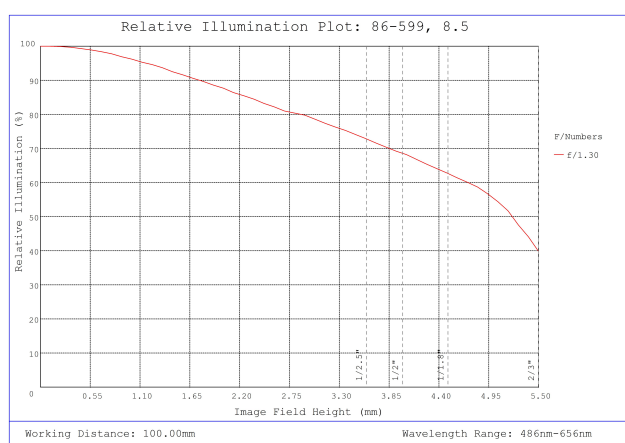
Edmund Optics has created a family of high performance optical designs (the C Series family) and developed 6 customized optomechanical solutions targeted for specific applications. These lens sub-families utilize the same optics as the C Series lenses providing the same optical performance in a variety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

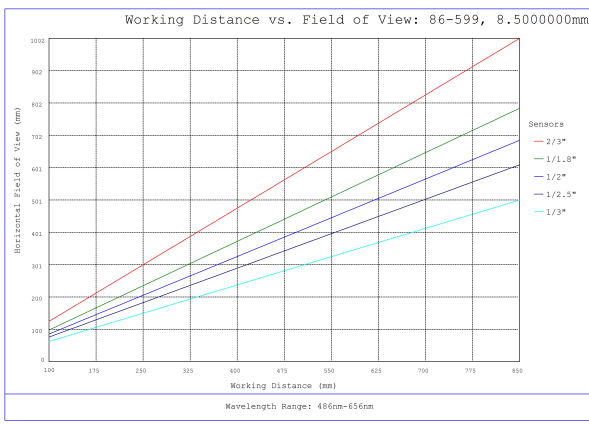
Technical Information



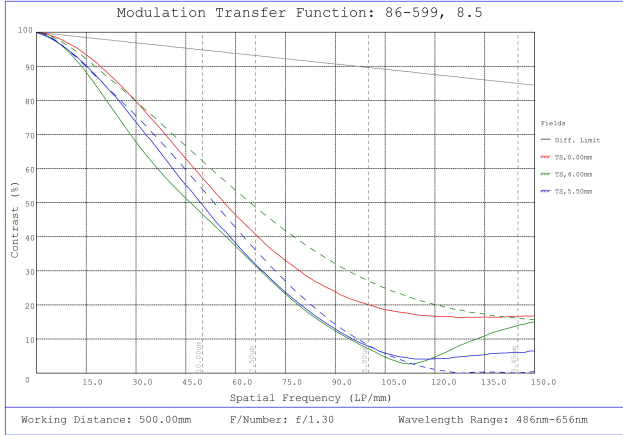
#86-599, 8.5mm, f/1.3 Ci Series Fixed Focal Length Lens, Distortion Plot



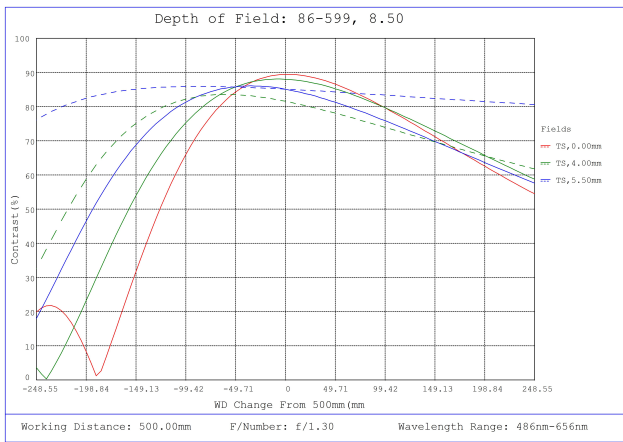
#86-599, 8.5mm, f/1.3 Ci Series Fixed Focal Length Lens, Relative Illumination Plot



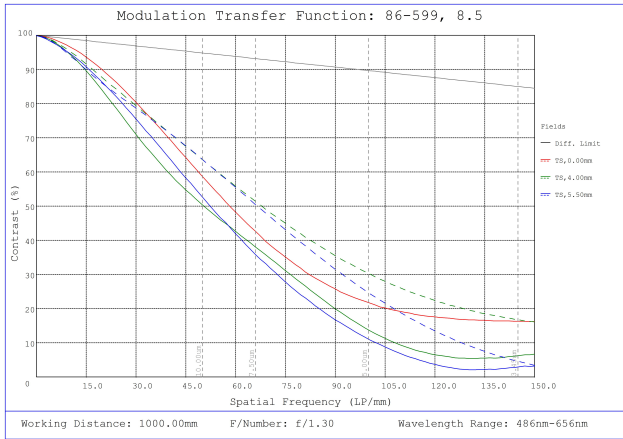
#86-599, 8.5mm, f/1.3 Ci Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



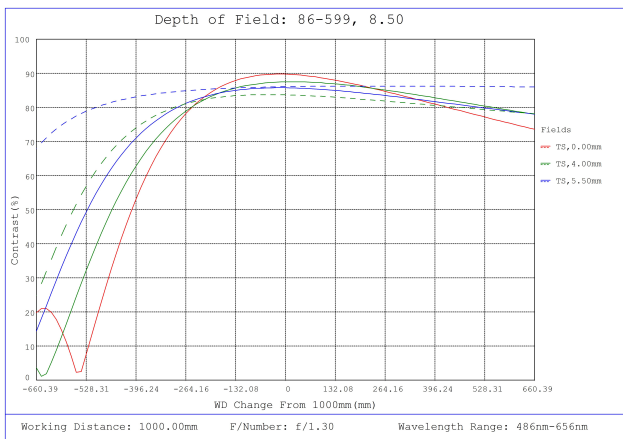
#86-599, 8.5mm, f/1.3 Ci Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 500mm Working Distance, f1.3



#86-599, 8.5mm, f/1.3 Ci Series Fixed Focal Length Lens, Depth of Field Plot, 500mm Working Distance, f1.3



#86-599, 8.5mm, f/1.3 Ci Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 1000mm Working Distance, f1.3



#86-599, 8.5mm, f/1.3 Ci Series Fixed Focal Length Lens, Depth of Field Plot, 1000mm Working Distance, f1.3

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