

TECHSPEC® 50mm, f/16.0 Ci Series Fixed Focal Length Lens



50mm Focal Length

Stock **#86-620** **3 In Stock**

-

1

+

S\$270⁰⁰

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Volume Pricing	
Qty 1-24	S\$270.00 each
Qty 25+	S\$243.00 each
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Product Downloads

General

Ci Series	Product Family:
Fixed Focal Length Lens	Type:

Physical & Mechanical Properties

Fixed	Iris Option:
	Length (mm):

49.50	
30.5	Maximum Diameter (mm):
30.5	Outer Diameter (mm):
63	Weight (g):
2.06	Maximum Rear Protrusion (mm):
26.50	Diameter (mm):

Optical Properties

42.8mm - 10.0°	Horizontal Field of View @ Max Sensor Format:
Horizontal: 42.7mm - 10° Vertical: 32mm - 7.5° Diagonal: 53.5mm - 12.5°	Field of View at Max Sensor Format:
42.8mm - 10.0°	Horizontal Field of View, 2/3" Sensor:
35.0mm - 8.2°	Horizontal Field of View, 1/1.8" Sensor:
31.1mm - 7.3°	Horizontal Field of View, 1/2" Sensor:
28.2mm - 6.6°	Horizontal Field of View, 1/2.5" Sensor:
23.3mm - 5.5°	Horizontal Field of View, 1/3" Sensor:
17.5mm - 4.1°	Horizontal Field of View, 1/4" Sensor:
11.00	Maximum Image Circle (mm):
0.0054	Numerical Aperture NA, Object Side:
6 (4)	Number of Elements (Groups):
50.00	Focal Length FL (mm):
250 - ∞	Working Distance (mm):
f/16	Aperture (f/#):
425 - 675nm BBAR	Coating:
425 - 675nm BBAR	Coating Specification:
35.62	Entrance Pupil Position (mm):
39.89	Object Space Principal Plane (mm):
-36.26	Image Space Principal Plane (mm):
0.26	Maximum Distortion (%):
-40.93	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 (Female)	Filter Thread:
#89-943 (Required)	Filter Thread Adapter:
M30.5 x 0.5 (Male)	Front Thread:
C-Mount	Mount:

Environmental & Durability Factors	
-20 to +60 Storage Temperature (°C):	
Type of Ruggedization: Industrial (Fixed Aperture with Simplified Mechanics)	
Regulatory Compliance	
Compliant RoHS 2015:	
Compliant REACH 201:	
View Certificate of Conformance:	

Product Details

These compact lenses are designed specifically for volume integration into applications such as analytical medical devices, including benchtop-based blood analyzers. For customized *f*/# versions to best suit your instrumentation application needs and to discuss volume requirements, please [contact us](#).

- 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.

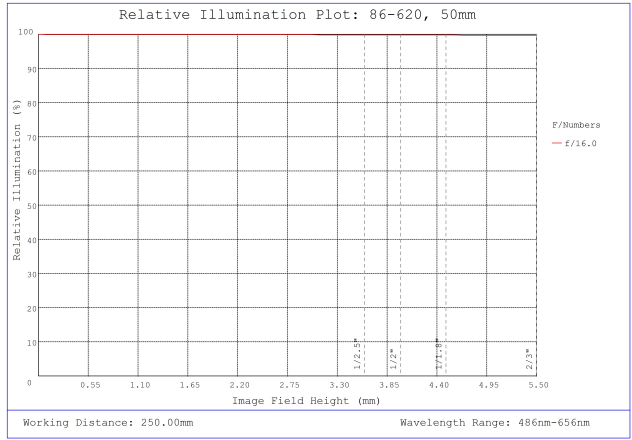
Edmund Optics has created a family of high performance optical designs (the C Series family) and developed 6 customized optomechanical solutions targeted for specific applications. These lens sub-families utilize the same optics as the C Series lenses providing the same optical performance in a variety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

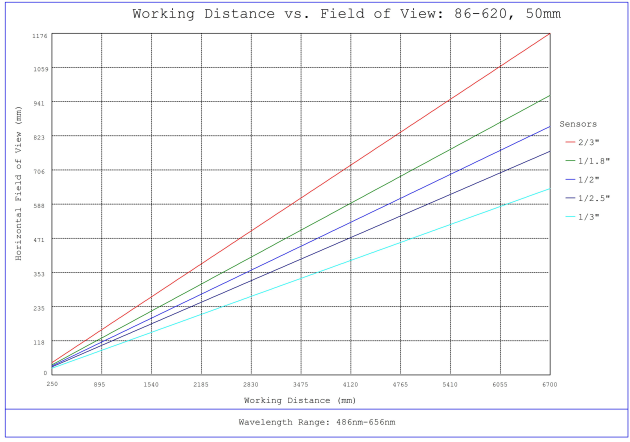
Technical Information



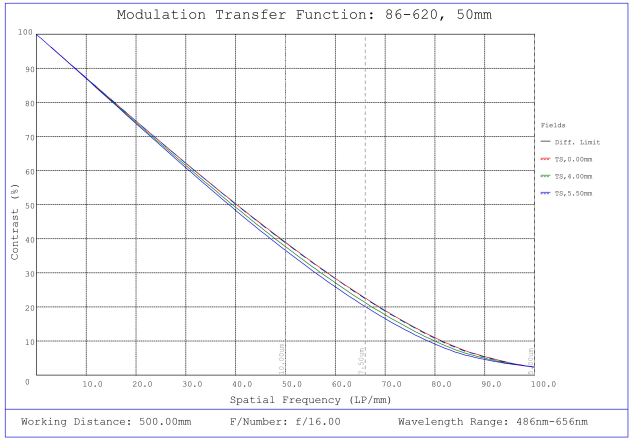
#86-620, 50mm, f/16.0 Ci Series Fixed Focal Length Lens, Distortion Plot



#86-620, 50mm, f/16.0 Ci Series Fixed Focal Length Lens, Relative Illumination Plot



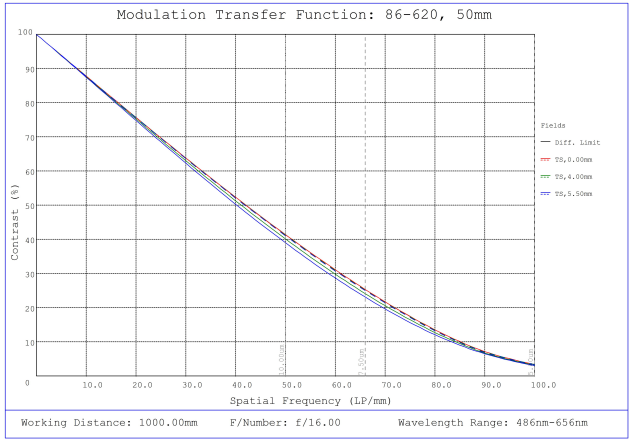
#86-620, 50mm, f/16.0 Ci Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



#86-620, 50mm, f/16.0 Ci Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 500mm Working Distance, f16



#86-620, 50mm, f/16.0 Ci Series Fixed Focal Length Lens, Depth of Field Plot, 500mm Working Distance, f16



#86-620, 50mm, f/16.0 Ci Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 1000mm Working Distance, f16



#86-620, 50mm, f/16.0 Ci Series Fixed Focal Length Lens, Depth of Field Plot, 1000mm Working Distance, f16

Focal Length	A	B	C	D
6mm	M34.0 x0.5	47.8mm	34mm	1.17mm
12mm	M22.0 x0.75	29.0mm	22mm	0.96mm
16mm	M22.0 x0.75	40.8mm	22mm	1.09mm
25mm	M22.0 x0.75	29.9mm	22mm	1.33mm
35mm	M25.5 x0.5	41mm	22.5mm	3.82mm
50mm	M30.5 x0.5	49.5mm	30.5mm	2.06mm



Compatible Cameras