

TECHSPEC[®] 50mm, f/2.8 Ci Series Fixed Focal Length Lens



50mm Focal Length

Stock **#86-615** 20+ In Stock

-

1

+

A\$297⁰⁰

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SPECIFICATIONS

General

Ci Series	Series:
Fixed Focal Length Lens	Type:

Physical & Mechanical Properties

	Iris Option:
Fixed	
	Length (mm):
49.50	
	Maximum Diameter (mm):
30.5	
	Outer Diameter (mm):
30.5	
	Weight (g):
63	
	Maximum Rear Protrusion (mm):
2.06	
	Diameter (mm):
26.50	
Optical Properties	
Horizontal Field of View @ Max Sensor Format: 42.8mm - 10.0°	
Field of View at Max Sensor Format: Horizontal: 42.7mm - 10° Vertical: 32mm - 7.5° Diagonal: 53.5mm - 12.5°	
Horizontal Field of View, 2/3" Sensor: 42.8mm - 10.0°	
Horizontal Field of View, 1/1.8" Sensor: 35.0mm - 8.2°	
Horizontal Field of View, 1/2" Sensor: 31.1mm - 7.3°	
Horizontal Field of View, 1/2.5" Sensor: 28.2mm - 6.6°	
Horizontal Field of View, 1/3" Sensor: 23.3mm - 5.5°	
Horizontal Field of View, 1/4" Sensor: 17.5mm - 4.1°	
Maximum Image Circle (mm):	
11.00	
Numerical Aperture NA, Object Side:	
0.031	
Number of Elements (Groups):	
6 (4)	
Focal Length FL (mm):	
50.00	
Working Distance (mm):	
250 - ∞	
Aperture (f/#):	
f/2.8	
Coating:	
425 - 675nm BBAR	
Coating Specification:	
425 - 675nm BBAR	
Entrance Pupil Position (mm):	
35.62	
Object Space Principal Plane (mm):	
39.89	
Image Space Principal Plane (mm):	
-36.26	
Maximum Distortion (%):	
0.26	
Exit Pupil Position (mm):	
-40.93	
Lens Wavelength Range:	
VS	
Sensor	
Maximum Sensor Format:	
2/3"	
Pixel Size (µm):	
2.74	
Threading & Mounting	
Filter Thread:	
M30.5 x 0.50 (Female)	
Filter Thread Adapter:	
#89-943 (Required)	

M30.5 x0.5 (Male)	Front Thread:
C-Mount	Mount:
Environmental & Durability Factors	
-20 to +60	Storage Temperature (°C):
Industrial (Fixed Aperture with Simplified Mechanics)	Type of Ruggedization:
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](#).

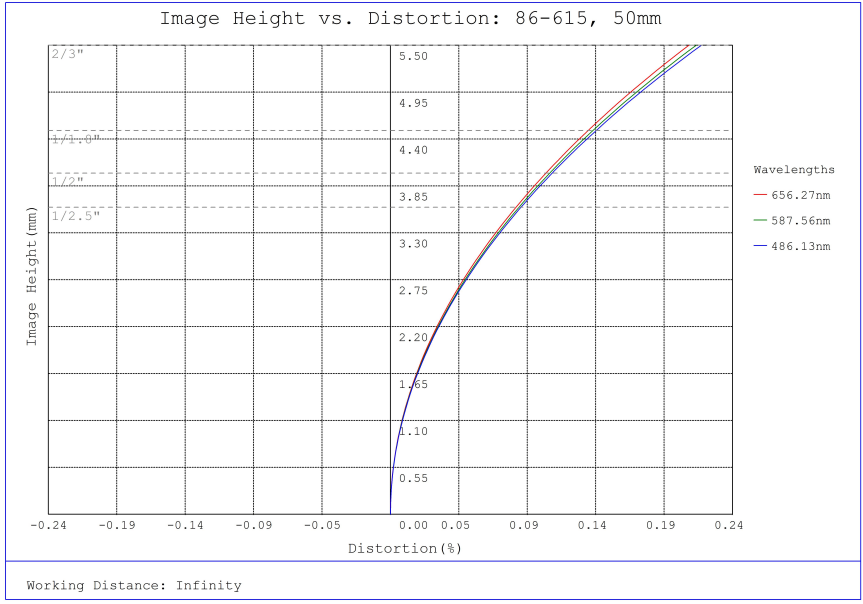
- Up to 2/3", C-Mount Lens
- Up to 7.5 MegaPixels, 2.8µm Pixel Size Sensors
- Instrumentation (Ci) Versions of our C Series Lenses with Streamlined Mechanical Designs and Fixed Apertures
- 3.5mm to 50mm Focal Length
- [Ruggedized \(Cr\) Designs](#) Also Available

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.

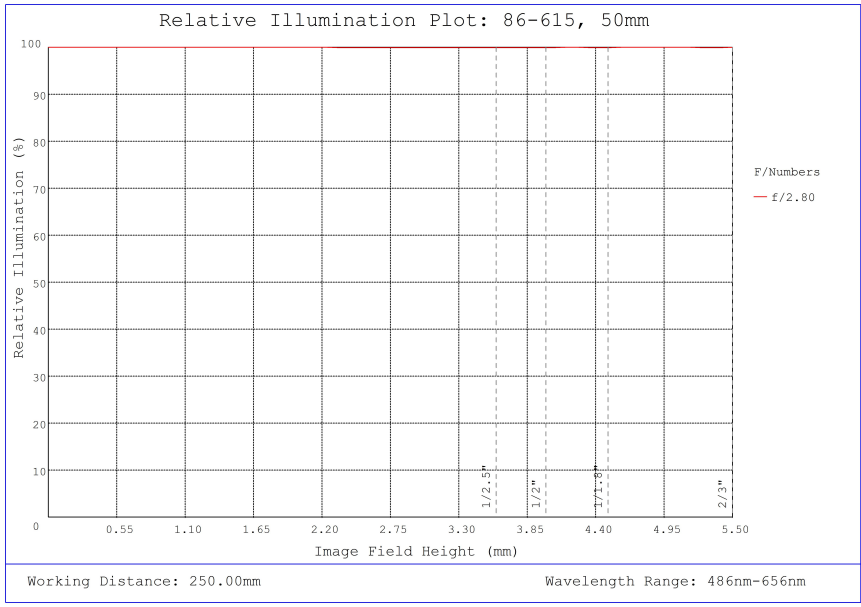
Edmund Optics has created a family of high performance optical designs (the C Series family) and developed 6 customized optomechanical solutions targeted for specific applications. These lens sub-families utilize the same optics as the C Series lenses providing the same optical performance in a variety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

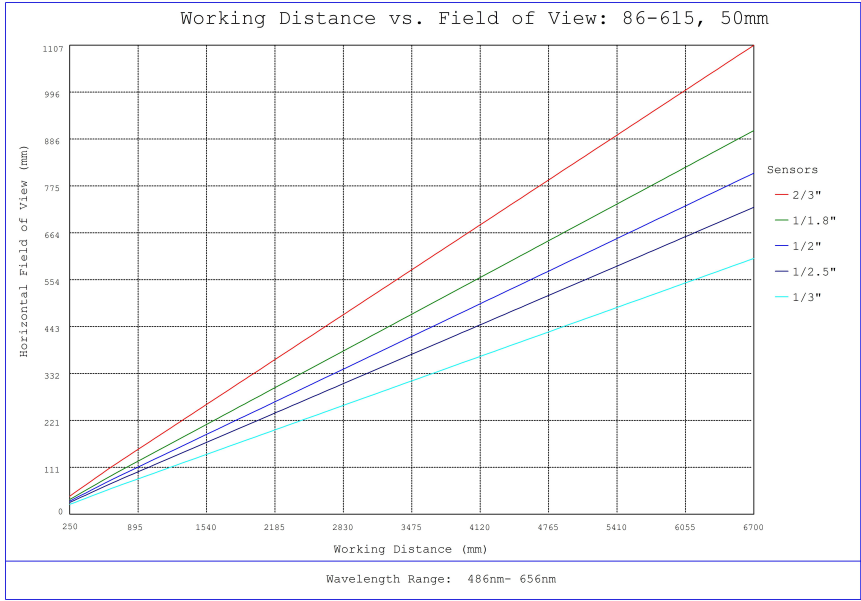
TECHNICAL INFORMATION



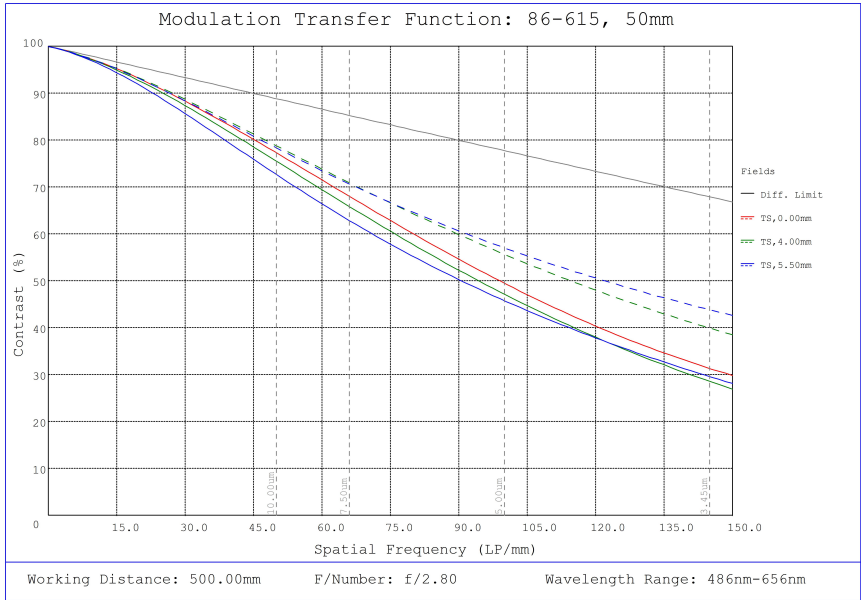
#86-615, 50mm, f/2.8 Ci Series Fixed Focal Length Lens, Distortion Plot



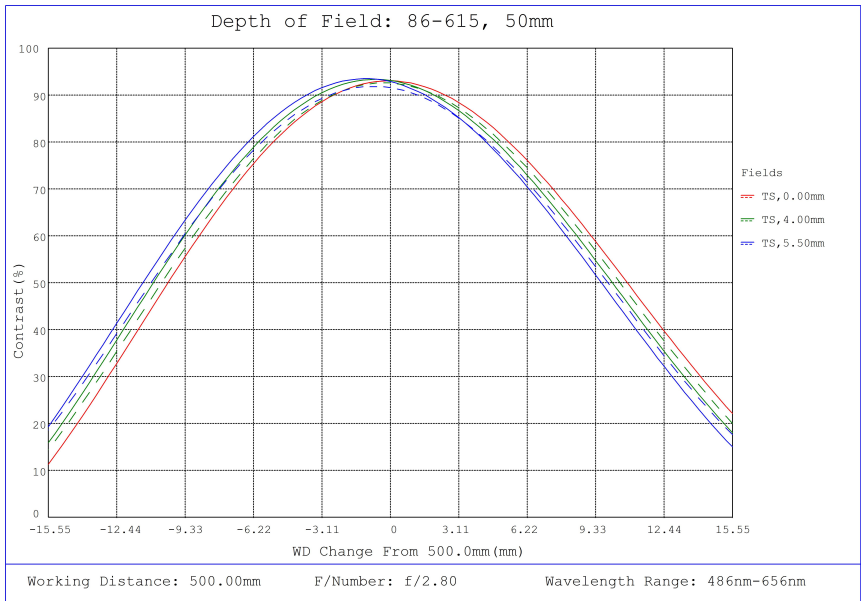
#86-615, 50mm, f/2.8 Ci Series Fixed Focal Length Lens, Relative Illumination Plot



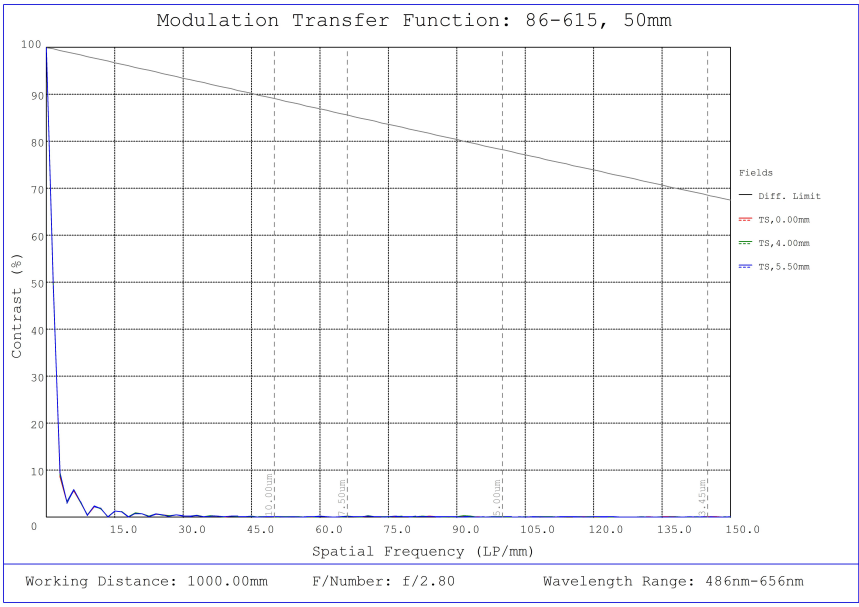
#86-615, 50mm, f/2.8 Ci Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



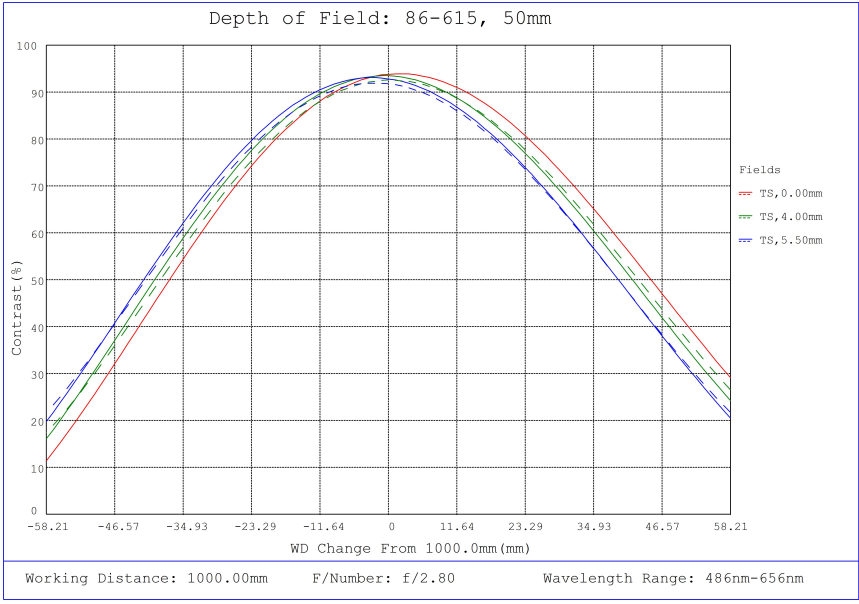
#86-615, 50mm, f/2.8 Ci Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 500mm Working Distance, f2.8



#86-615, 50mm, f/2.8 Ci Series Fixed Focal Length Lens, Depth of Field Plot, 500mm Working Distance, f2.8



#86-615, 50mm, f/2.8 Ci Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 1000mm Working Distance, f2.8



#86-615, 50mm, f/2.8 Ci Series Fixed Focal Length Lens, Depth of Field Plot, 1000mm Working Distance, f2.8

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