

TECHSPEC® 12mm, f/1.8 Ci Series Fixed Focal Length Lens



12mm Focal Length

Stock **#86-607** **5 In Stock**

⊖ 1 ⊕ **\$200⁰⁰**

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Volume Pricing	
Qty 1-24	\$200.00 each
Qty 25+	\$181.00 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	
29.00	Length (mm):
26.5	Maximum Diameter (mm):
26.5	Outer Diameter (mm):
31	Weight (g):
0.31	Maximum Rear Protrusion (mm):
26.50	Diameter (mm):

Optical Properties

80.9mm - 41.2°	Horizontal Field of View @ Max Sensor Format:
Horizontal: 81.2mm - 41.2° Vertical: 60.4mm - 31.3° Diagonal: 102.1mm - 50.5°	Field of View at Max Sensor Format:
80.9mm - 41.2°	Horizontal Field of View, 2/3" Sensor:
65.8mm - 34.0°	Horizontal Field of View, 1/1.8" Sensor:
58.3mm - 30.4°	Horizontal Field of View, 1/2" Sensor:
52.8mm - 27.6°	Horizontal Field of View, 1/2.5" Sensor:
43.5mm - 22.9°	Horizontal Field of View, 1/3" Sensor:
32.6mm - 17.2°	Horizontal Field of View, 1/4" Sensor:
11.00	Maximum Image Circle (mm):
0.0292	Numerical Aperture NA, Object Side:
7 (7)	Number of Elements (Groups):
12.00	Focal Length FL (mm):
100 - ∞	Working Distance (mm):
f/1.8	Aperture (f/#):
425 - 675nm BBAR	Coating:
425 - 675nm BBAR	Coating Specification:
11.01	Entrance Pupil Position (mm):
17.32	Object Space Principal Plane (mm):
1.98	Image Space Principal Plane (mm):
-2.09	Maximum Distortion (%):
-11.38	Exit Pupil Position (mm):
VIS	Lens Wavelength Range:

Sensor

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

Threading & Mounting

M25.5 x 0.50 (Male)	Filter Thread:
#89-941 (Required)	Filter Thread Adapter:
M22.0 x 0.75 (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

Certificate of Conformance:
View

Reach 235:
Compliant

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](#).

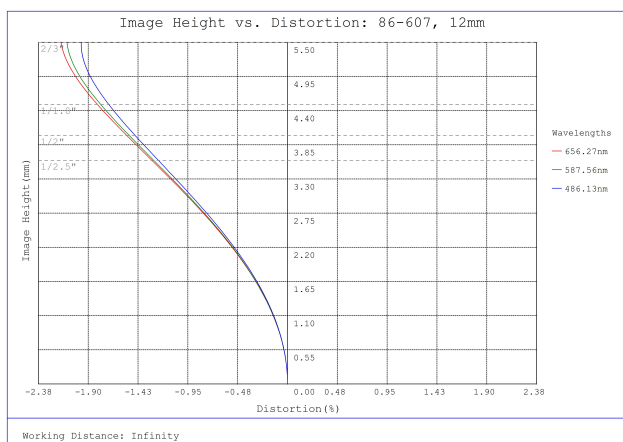
- Up to 2/3", C-Mount Lens
- Up to 7.5 MegaPixels, 2.8µm Pixel Size Sensors
- Instrumentation (Ci) Versions of our C Series Lenses with Streamlined Mechanical Designs and Fixed Apertures
- 3.5mm to 50mm Focal Length
- **Ruggedized (Cr) Designs** Also Available

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.

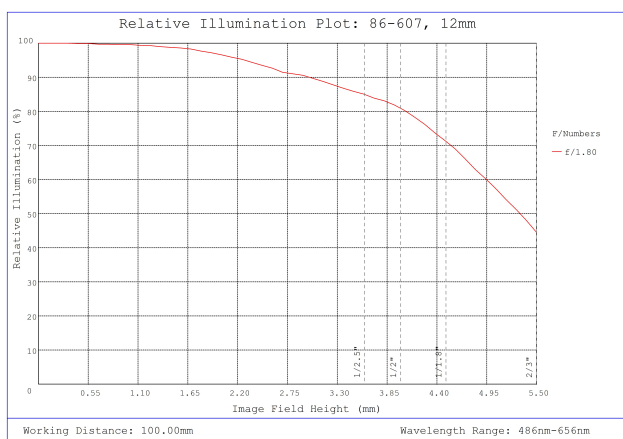
Edmund Optics has created a family of high performance optical designs (the C Series family) and developed 6 customized optomechanical solutions targeted for specific applications. These lens sub-families utilize the same optics as the C Series lenses providing the same optical performance in a variety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

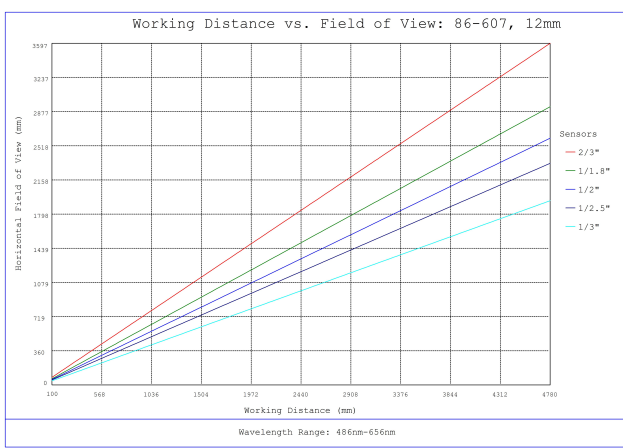
Technical Information



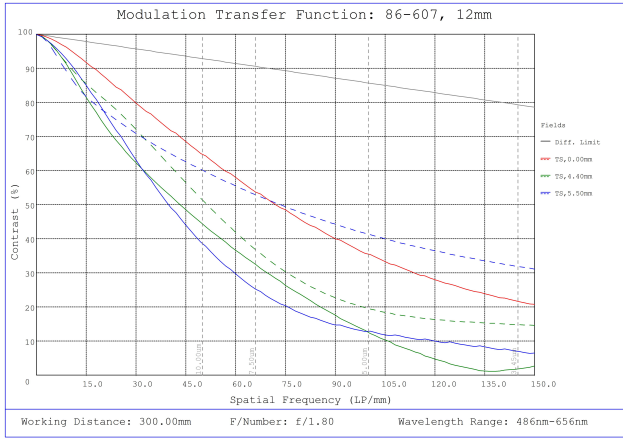
#86-607, 12mm, f/1.8 Ci Series Fixed Focal Length Lens, Distortion Plot



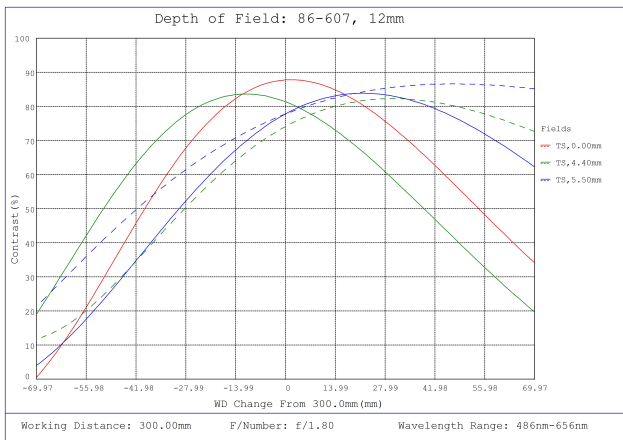
#86-607, 12mm, f/1.8 Ci Series Fixed Focal Length Lens, Relative Illumination Plot



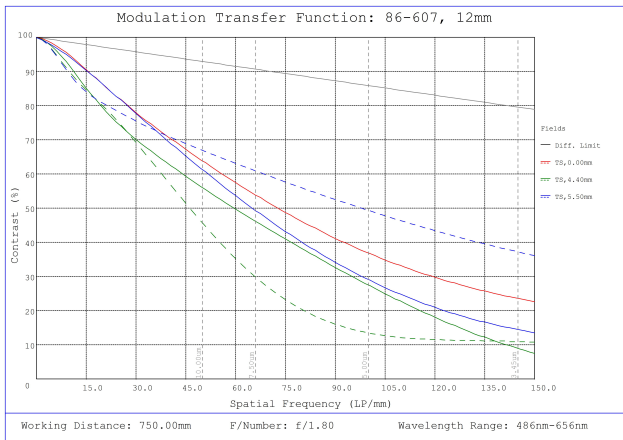
#86-607, 12mm, f/1.8 Ci Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



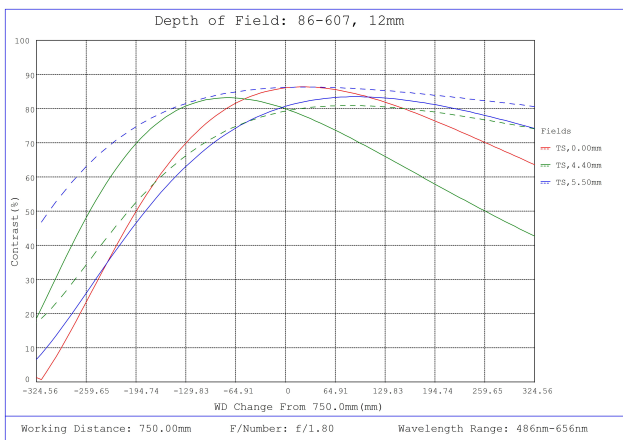
#86-607, 12mm, f/1.8 Ci Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 300mm Working Distance, f1.8



#86-607, 12mm, f/1.8 Ci Series Fixed Focal Length Lens, Depth of Field Plot, 300mm Working Distance, f1.8



#86-607, 12mm, f/1.8 Ci Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 750mm Working Distance, f1.8



#86-607, 12mm, f/1.8 Ci Series Fixed Focal Length Lens, Depth of Field Plot, 750mm Working Distance, f1.8

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