

**TECHSPEC® 16mm, f/1.8 Ci Series Fixed Focal Length Lens**



16mm Focal Length

Stock **#85-349** **20+ In Stock**

⊖ 1 ⊕ **\$\$200<sup>00</sup>**

**ADD TO CART**

Volume Pricing	
Qty 1-24	<b>\$\$200.00</b> each
Qty 25+	<b>\$\$181.00</b> each
Need More?	<a href="#">Request Quote</a>

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**General**

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

**Physical & Mechanical Properties**

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

40.80	
26.5	<b>Maximum Diameter (mm):</b>
26.5	<b>Outer Diameter (mm):</b>
37	<b>Weight (g):</b>
1.09	<b>Maximum Rear Protrusion (mm):</b>
26.50	<b>Diameter (mm):</b>

## Optical Properties

61.4mm - 30.9°	<b>Horizontal Field of View @ Max Sensor Format:</b>
Horizontal: 59.7mm - 30.9° Vertical: 44.6mm - 23.4° Diagonal: 75mm - 38.3°	<b>Field of View at Max Sensor Format:</b>
61.4mm - 30.9°	<b>Horizontal Field of View, 2/3" Sensor:</b>
50.1mm - 25.2°	<b>Horizontal Field of View, 1/1.8" Sensor:</b>
44.5mm - 22.7°	<b>Horizontal Field of View, 1/2" Sensor:</b>
39.6mm - 20.2°	<b>Horizontal Field of View, 1/2.5" Sensor:</b>
33.3mm - 17.1°	<b>Horizontal Field of View, 1/3" Sensor:</b>
25mm - 12.8°	<b>Horizontal Field of View, 1/4" Sensor:</b>
11.00	<b>Maximum Image Circle (mm):</b>
0.0366	<b>Numerical Aperture NA, Object Side:</b>
7 (6)	<b>Number of Elements (Groups):</b>
16.00	<b>Focal Length FL (mm):</b>
100 - ∞	<b>Working Distance (mm):</b>
f/1.8	<b>Aperture (f/#):</b>
425 - 675nm BBAR	<b>Coating:</b>
425 - 675nm BBAR	<b>Coating Specification:</b>
19.19	<b>Entrance Pupil Position (mm):</b>
21.30	<b>Object Space Principal Plane (mm):</b>
-3.00	<b>Image Space Principal Plane (mm):</b>
-0.77	<b>Maximum Distortion (%):</b>
-5.43	<b>Exit Pupil Position (mm):</b>
VIS	<b>Lens Wavelength Range:</b>

## Sensor

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

## Threading & Mounting

M25.5 x 0.50 (Male)	<b>Filter Thread:</b>
<a href="#">#89-941 (Required)</a>	<b>Filter Thread Adapter:</b>
M22.0 x 0.75 (Male)	<b>Front Thread:</b>
C-Mount	<b>Mount:</b>

## 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

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](#).

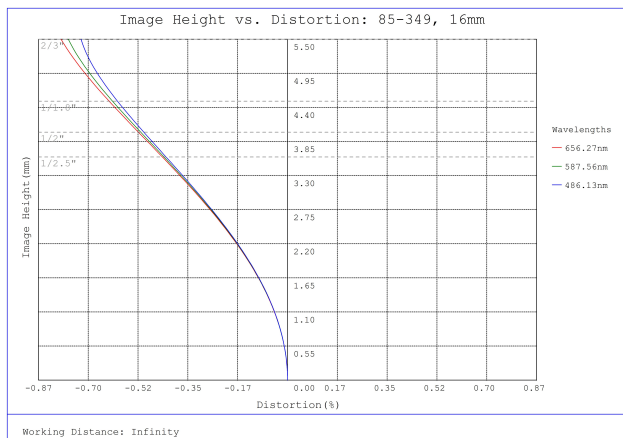
- Up to 2/3", C-Mount Lens
- Up to 7.5 MegaPixels, 2.8 $\mu$ m Pixel Size Sensors
- Instrumentation (Ci) Versions of our C Series Lenses with Streamlined Mechanical Designs and Fixed Apertures
- 3.5mm to 50mm Focal Length
- **Ruggedized (Cr) Designs** Also Available

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.

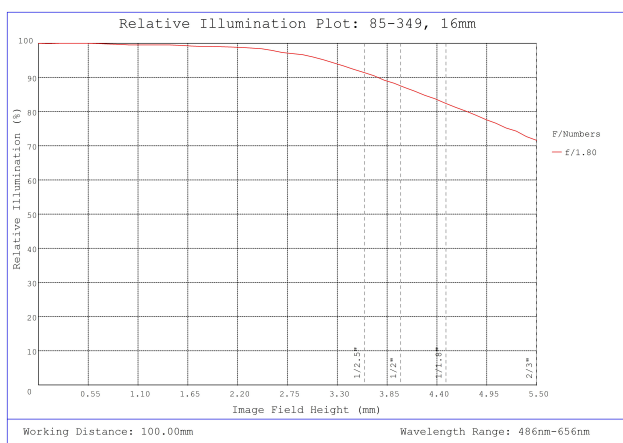
Edmund Optics has created a family of high performance optical designs (the C Series family) and developed 6 customized optomechanical solutions targeted for specific applications. These lens sub-families utilize the same optics as the C Series lenses providing the same optical performance in a variety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

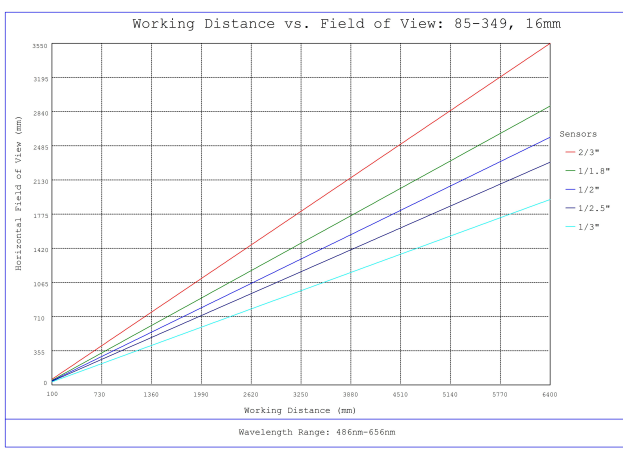
## Technical Information



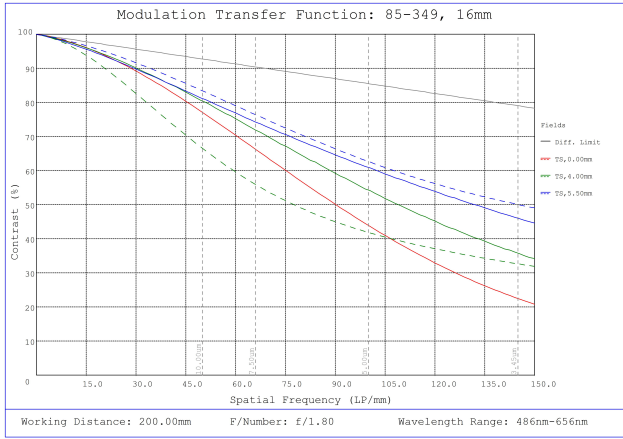
#85-349, 16mm,  $f/1.8$  Ci Series Fixed Focal Length Lens, Distortion Plot



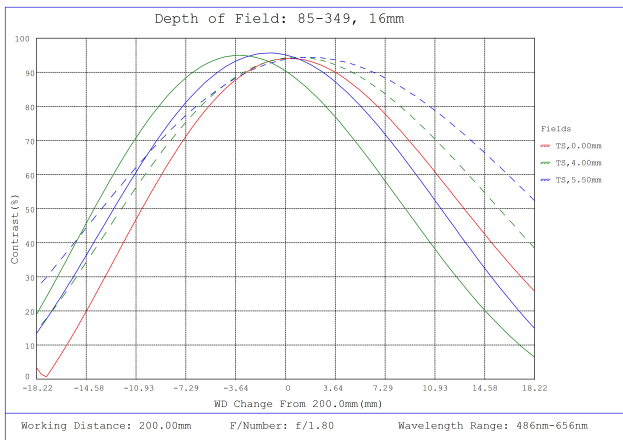
#85-349, 16mm,  $f/1.8$  Ci Series Fixed Focal Length Lens, Relative Illumination Plot



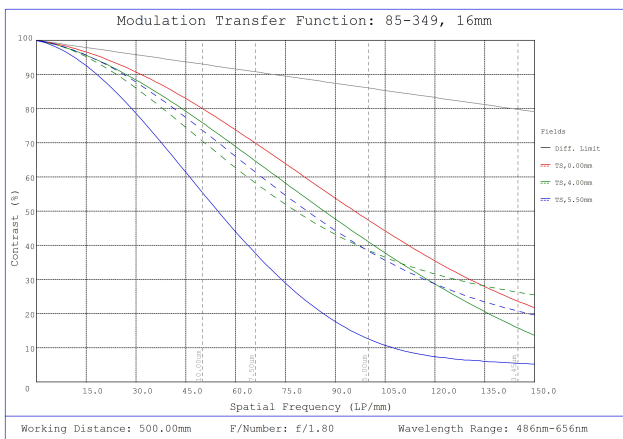
#85-349, 16mm, f/1.8 Ci Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



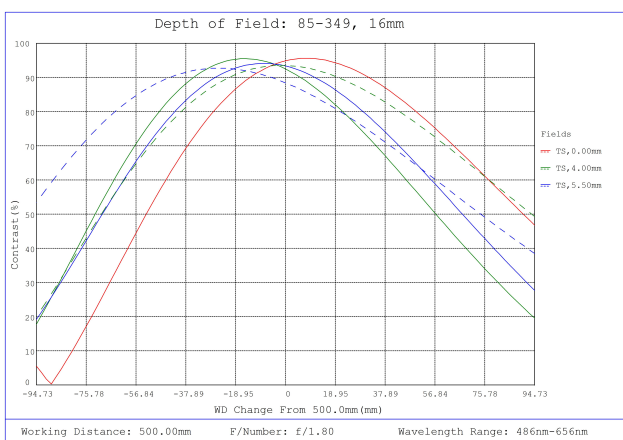
#85-349, 16mm, f/1.8 Ci Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 200mm Working Distance, f1.8



#85-349, 16mm, f/1.8 Ci Series Fixed Focal Length Lens, Depth of Field Plot, 200mm Working Distance, f1.8



#85-349, 16mm, f/1.8 Ci Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 500mm Working Distance, f1.8



#85-349, 16mm, f/1.8 Ci Series Fixed Focal Length Lens, Depth of Field Plot, 500mm 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