

TECHSPEC<sup>®</sup> 50mm, f/2.8 Ci Series Fixed Focal Length Lens



50mm Focal Length

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

-

1

+

€285<sup>00</sup>

ADD TO CART

| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-24       | €285,00 each                  |
| Qty 25+        | €257,00 each                  |
| Need More?     | <a href="#">Request Quote</a> |

ⓘ Prices shown are exclusive of VAT/local taxes

Product Downloads

General

|                         |                 |
|-------------------------|-----------------|
| Ci Series               | Product Family: |
| Fixed Focal Length Lens | Type:           |

Physical & Mechanical Properties

|       |              |
|-------|--------------|
| Fixed | Iris Option: |
|-------|--------------|

|       |                               |
|-------|-------------------------------|
| 49.50 | Length (mm):                  |
| 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°<br>Vertical: 32mm - 7.5°<br>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):                    |
| 0.031                                                                         | Numerical Aperture NA, Object Side:           |
| 6 (4)                                                                         | Number of Elements (Groups):                  |
| 50.00                                                                         | Focal Length FL (mm):                         |
| 250 - ∞                                                                       | Working Distance (mm):                        |
| f/2.8                                                                         | 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 x0.50 (Female) | Filter Thread:         |
| #89-943 (Required)   | Filter Thread Adapter: |
| 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](#).

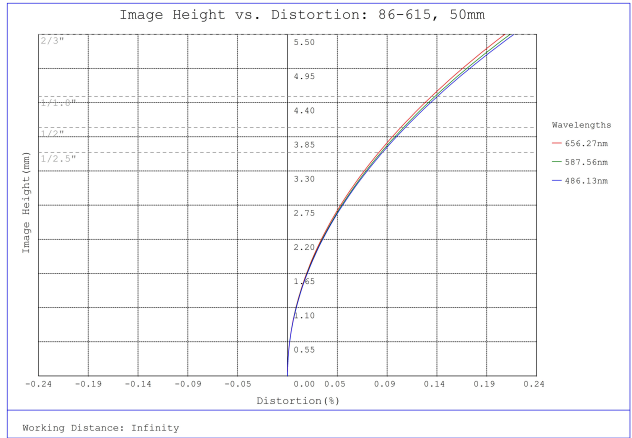
- Up to 2/3", C-Mount Lens
- Up to 7.5 MegaPixels, 2.8µm Pixel Size Sensors
- Instrumentation (Ci) Versions of our C Series Lenses with Streamlined Mechanical Designs and Fixed Apertures
- 3.5mm to 50mm Focal Length
- [Ruggedized \(Cr\) Designs](#) Also Available

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.

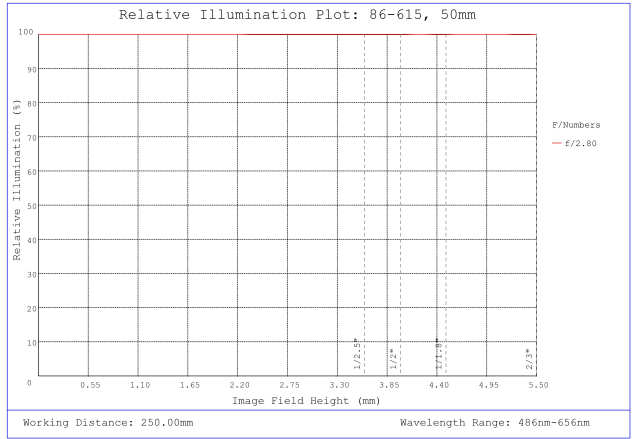
Edmund Optics has created a family of high performance optical designs (the C Series family) and developed 6 customized optomechanical solutions targeted for specific applications. These lens sub-families utilize the same optics as the C Series lenses providing the same optical performance in a variety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

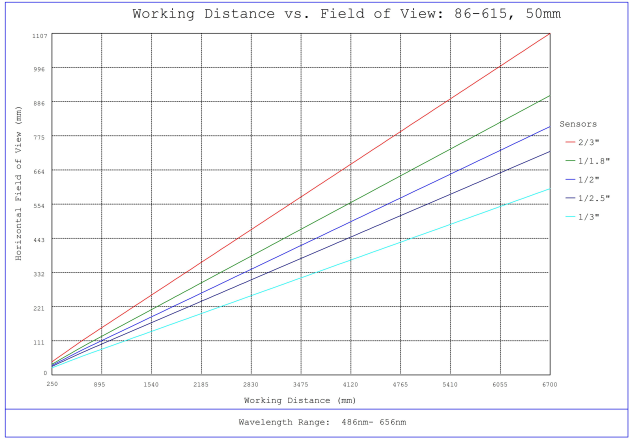
## Technical Information



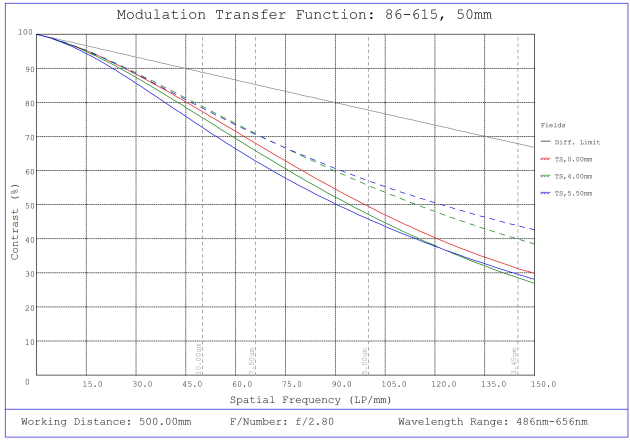
#86-615, 50mm, f/2.8 Ci Series Fixed Focal Length Lens, Distortion Plot



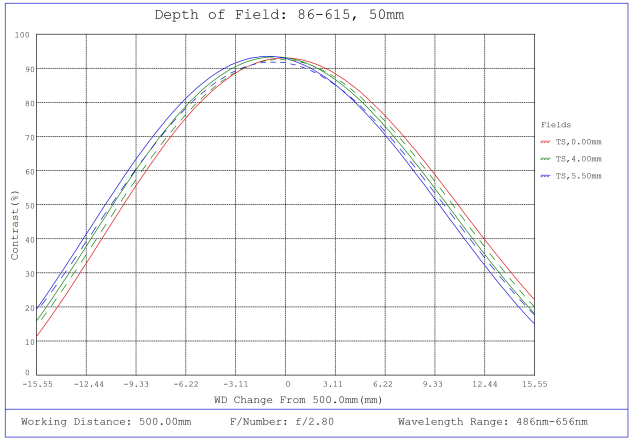
#86-615, 50mm, f/2.8 Ci Series Fixed Focal Length Lens, Relative Illumination Plot



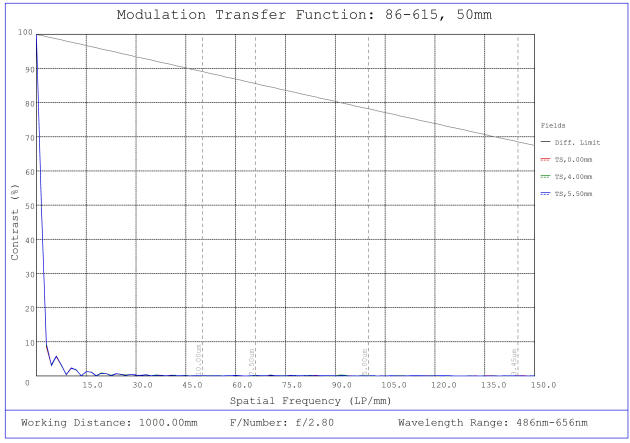
#86-615, 50mm, f/2.8 Ci Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



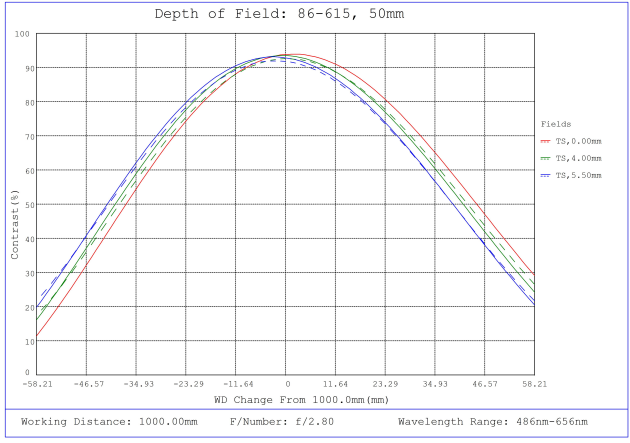
#86-615, 50mm, f/2.8 Ci Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 500mm Working Distance, f2.8



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

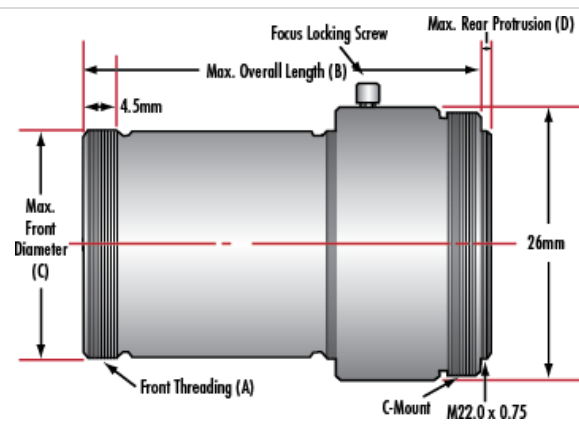


#86-615, 50mm, f/2.8 Ci Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 1000mm Working Distance, f2.8



#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 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