

TECHSPEC<sup>®</sup> 6mm, f/1.4 Ci Series Fixed Focal Length Lens



6mm Focal Length

Stock **#86-591** 20+ In Stock

-

1

+

S\$279<sup>00</sup>

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SPECIFICATIONS

General

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

|                                  |                    |
|----------------------------------|--------------------|
| Compact Lens with Fixed Aperture | Imaging Lens Type: |
|----------------------------------|--------------------|

| Physical & Mechanical Properties                                                                                            |                                     |
|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| Fixed                                                                                                                       | Iris Option:                        |
| 47.80                                                                                                                       | Length (mm):                        |
| 34                                                                                                                          | Maximum Diameter (mm):              |
| 34                                                                                                                          | Outer Diameter (mm):                |
| 64                                                                                                                          | Weight (g):                         |
| 1.17                                                                                                                        | Maximum Rear Protrusion (mm):       |
| 26.50                                                                                                                       | Diameter (mm):                      |
| Optical Properties                                                                                                          |                                     |
| Horizontal Field of View @ Max Sensor Format:<br>110.2mm - 62.1°                                                            |                                     |
| Field of View at Max Sensor Format:<br>Horizontal: 110.2mm - 62.1°<br>Vertical: 80.5mm - 47.8°<br>Diagonal: 142.1mm - 75.1° |                                     |
| Horizontal Field of View, 1/1.8" Sensor:<br>110.2mm - 62.1°                                                                 |                                     |
| Horizontal Field of View, 1/2" Sensor:<br>96.8mm - 55.9°                                                                    |                                     |
| Horizontal Field of View, 1/2.5" Sensor:<br>86.9mm - 51.0°                                                                  |                                     |
| Horizontal Field of View, 1/3" Sensor:<br>71.0mm - 42.7°                                                                    |                                     |
| Horizontal Field of View, 1/4" Sensor:<br>52.6mm - 32.4°                                                                    |                                     |
| 9.00                                                                                                                        | Maximum Image Circle (mm):          |
| 0.0246                                                                                                                      | Numerical Aperture NA, Object Side: |
| 9 (7)                                                                                                                       | Number of Elements (Groups):        |
| 6.00                                                                                                                        | Focal Length FL (mm):               |
| 75 - ∞                                                                                                                      | Working Distance (mm):              |
| f/1.4                                                                                                                       | Aperture (f/#):                     |
| 425 - 675nm BBAR                                                                                                            | Coating:                            |
| 425 - 675nm BBAR                                                                                                            | Coating Specification:              |
| 16.08                                                                                                                       | Entrance Pupil Position (mm):       |
| 21.35                                                                                                                       | Object Space Principal Plane (mm):  |
| 6.60                                                                                                                        | Image Space Principal Plane (mm):   |
| -6.82                                                                                                                       | Maximum Distortion (%):             |
| -25.52                                                                                                                      | Exit Pupil Position (mm):           |
| VS                                                                                                                          | Lens Wavelength Range:              |
| Sensor                                                                                                                      |                                     |
| 1/1.8"                                                                                                                      | Maximum Sensor Format:              |
| 2.74                                                                                                                        | Pixel Size (µm):                    |
| Threading & Mounting                                                                                                        |                                     |
| M43 x0.75 (Female)                                                                                                          | Filter Thread:                      |
| #89-940 (Required)                                                                                                          | Filter Thread Adapter:              |

|                                                       |  |
|-------------------------------------------------------|--|
| Front Thread:                                         |  |
| M34.0 x0.5 (Male)                                     |  |
| Mount:                                                |  |
| C-Mount                                               |  |
| 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, 2.8µm 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.

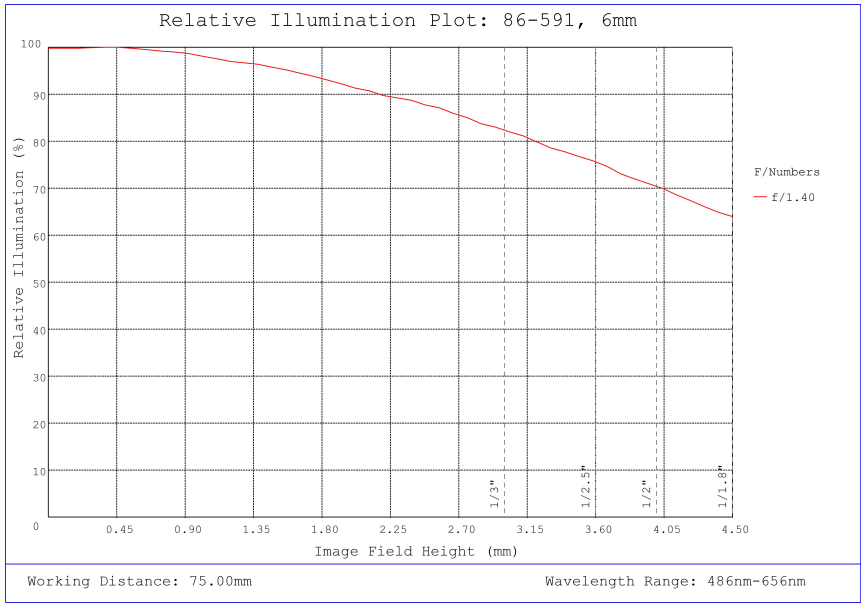
Edmund Optics has created a family of high performance optical designs (the C Series family) and developed 6 customized optomechanical solutions targeted for specific applications. These lens sub-families utilize the same optics as the C Series lenses providing the same optical performance in a variety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

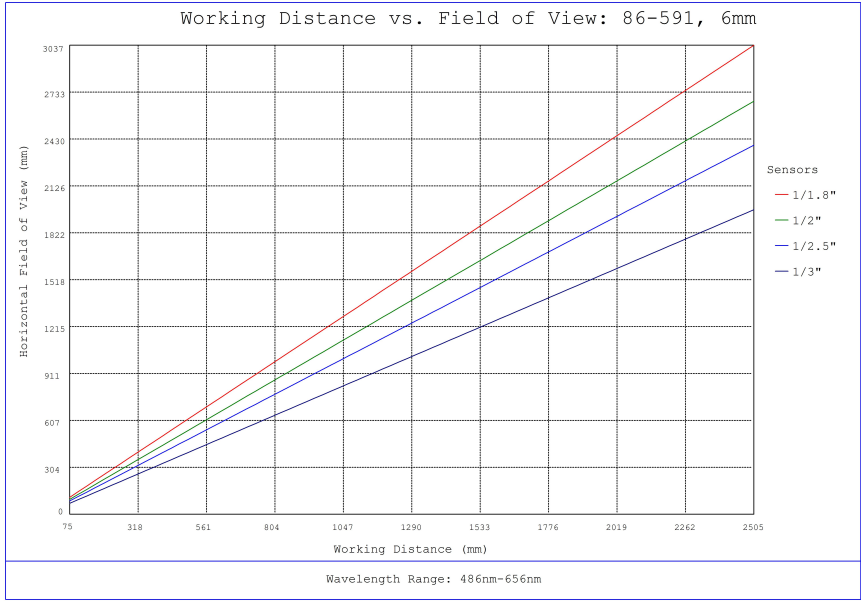
## TECHNICAL INFORMATION



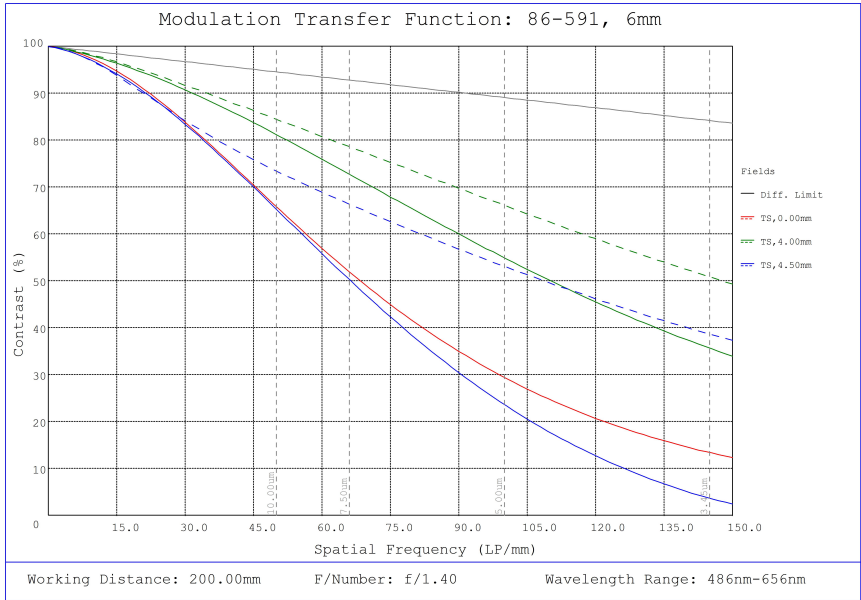
#86-591, 6mm, f/1.4 Ci Series Fixed Focal Length Lens, Distortion Plot



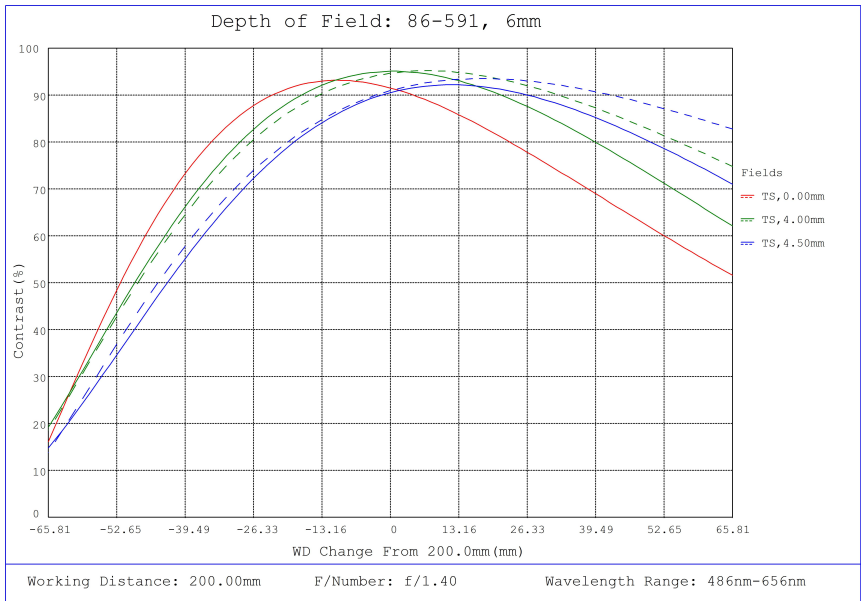
#86-591, 6mm, f/1.4 Ci Series Fixed Focal Length Lens, Relative Illumination Plot



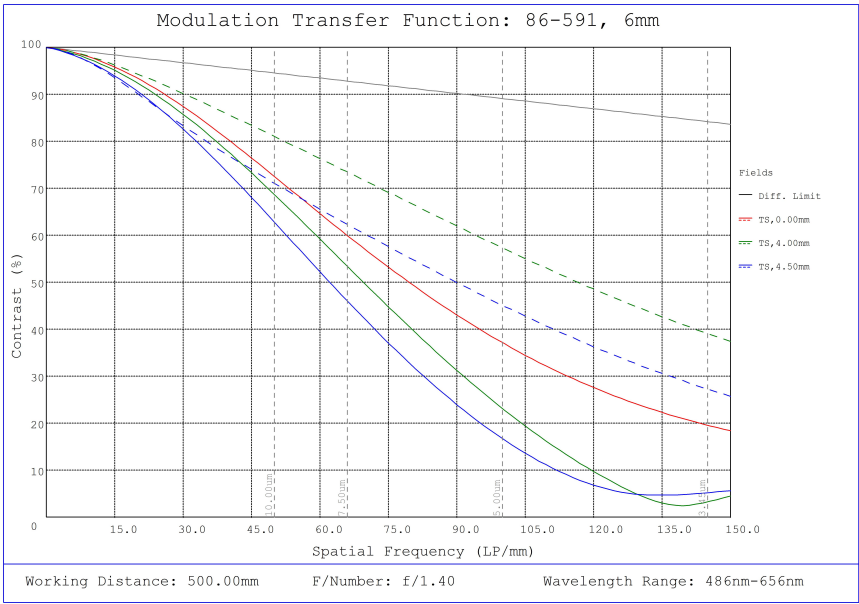
#86-591, 6mm, f/1.4 Ci Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



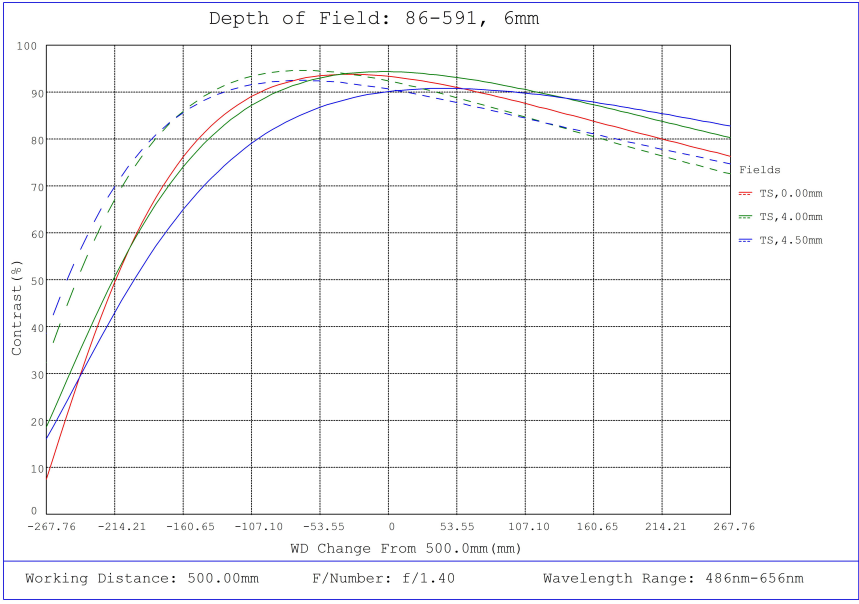
#86-591, 6mm, f/1.4 Ci Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 200mm Working Distance, f1.4



#86-591, 6mm, f/1.4 Ci Series Fixed Focal Length Lens, Depth of Field Plot, 200mm Working Distance, f1.4

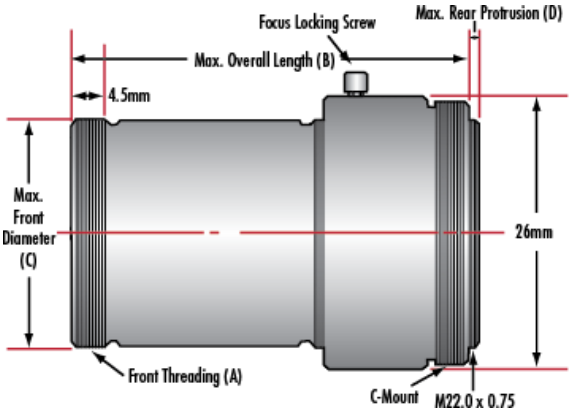


#86-591, 6mm, f/1.4 Ci Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 500mm Working Distance, f1.4



#86-591, 6mm, f/1.4 Ci Series Fixed Focal Length Lens, Depth of Field Plot, 500mm Working Distance, f1.4

| 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