

TECHSPEC® 8.5mm, f/8 Ci Series Fixed Focal Length Lens



8.5mm Focal Length

Stock #86-604 14 In Stock

-

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+

S\$200<sup>00</sup>

ADD TO CART

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

Product Downloads

General

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

Physical & Mechanical Properties

|       |              |
|-------|--------------|
| Fixed | Iris Option: |
|       | Length (mm): |

|       |                               |
|-------|-------------------------------|
| 33.98 |                               |
| 26.5  | Maximum Diameter (mm):        |
| 26.5  | Outer Diameter (mm):          |
| 34    | Weight (g):                   |
| 0.6   | Maximum Rear Protrusion (mm): |
| 26.50 | Diameter (mm):                |

Optical Properties

|                                                                                  |                                               |
|----------------------------------------------------------------------------------|-----------------------------------------------|
| 128.6mm - 60.6°                                                                  | Horizontal Field of View @ Max Sensor Format: |
| Horizontal: 124.9mm - 60.7°<br>Vertical: 88.9mm - 45°<br>Diagonal: 168.8mm - 77° | Field of View at Max Sensor Format:           |
| 128.6mm - 60.6°                                                                  | Horizontal Field of View, 2/3" Sensor:        |
| 101.0mm - 49.2°                                                                  | Horizontal Field of View, 1/1.8" Sensor:      |
| 88.3mm - 43.6°                                                                   | Horizontal Field of View, 1/2" Sensor:        |
| 79.2mm - 39.5°                                                                   | Horizontal Field of View, 1/2.5" Sensor:      |
| 64.6mm - 32.6°                                                                   | Horizontal Field of View, 1/3" Sensor:        |
| 47.8mm - 24.4°                                                                   | Horizontal Field of View, 1/4" Sensor:        |
| 11.00                                                                            | Maximum Image Circle (mm):                    |
| 0.0048                                                                           | Numerical Aperture NA, Object Side:           |
| 7 (5)                                                                            | Number of Elements (Groups):                  |
| 8.50                                                                             | Focal Length FL (mm):                         |
| 100 - ∞                                                                          | Working Distance (mm):                        |
| f/8                                                                              | Aperture (f/#):                               |
| 425 - 675nm BBAR                                                                 | Coating:                                      |
| 425 - 675nm BBAR                                                                 | Coating Specification:                        |
| 8.22                                                                             | Entrance Pupil Position (mm):                 |
| 14.08                                                                            | Object Space Principal Plane (mm):            |
| 6.67                                                                             | Image Space Principal Plane (mm):             |
| -18.51                                                                           | Maximum Distortion (%):                       |
| -12.23                                                                           | Exit Pupil Position (mm):                     |
| VIS                                                                              | Lens Wavelength Range:                        |

Sensor

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

Threading & Mounting

|                     |                        |
|---------------------|------------------------|
| M30.5 x 0.50 (Male) | Filter Thread:         |
| #89-932 (Required)  | Filter Thread Adapter: |
| M22.0 x 0.5 (Male)  | Front Thread:          |
| C-Mount             | Mount:                 |

| Environmental & Durability Factors                                                                           |  |
|--------------------------------------------------------------------------------------------------------------|--|
| <div><div>-20 to +60</div><div>Storage Temperature (°C):</div></div>                                         |  |
| <div><div>Industrial (Fixed Aperture with Simplified Mechanics)</div><div>Type of Ruggedization:</div></div> |  |
| Regulatory Compliance                                                                                        |  |
| <div><div>Compliant</div><div>RoHS 2015:</div></div>                                                         |  |
| <div><div>Compliant</div><div>REACH 201:</div></div>                                                         |  |
| <div><div>View</div><div>Certificate of Conformance:</div></div>                                             |  |

## Product Details

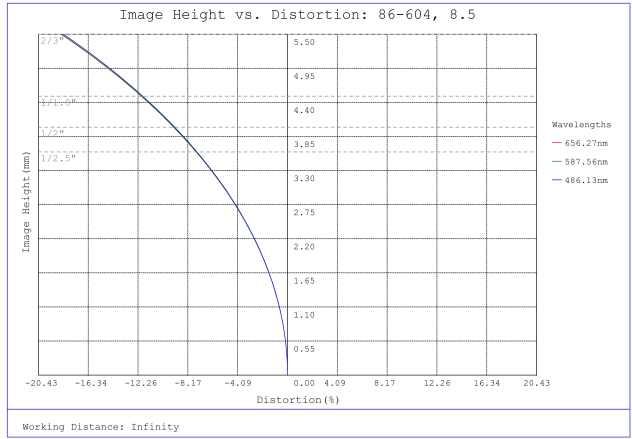
- Up to 2/3", C-Mount Lens
- Up to 7.5 MegaPixels, 2.8µm Pixel Size Sensors
- Instrumentation (Ci) Versions of our C Series Lenses with Streamlined Mechanical Designs and Fixed Apertures
- 3.5mm to 50mm Focal Length
- **Ruggedized (Cr) Designs** Also Available

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.

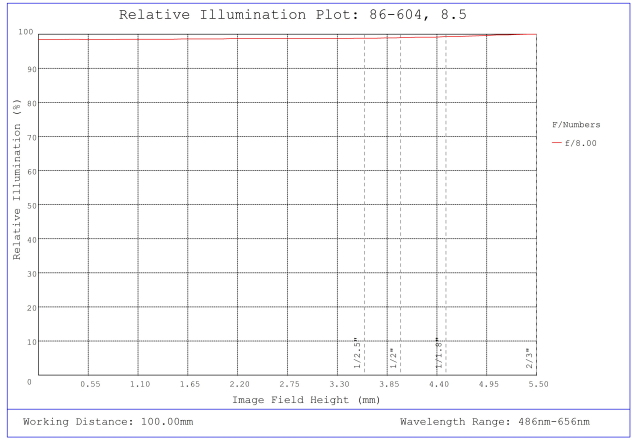
Edmund Optics has created a family of high performance optical designs (the C Series family) and developed 6 customized optomechanical solutions targeted for specific applications. These lens sub-families utilize the same optics as the C Series lenses providing the same optical performance in a variety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

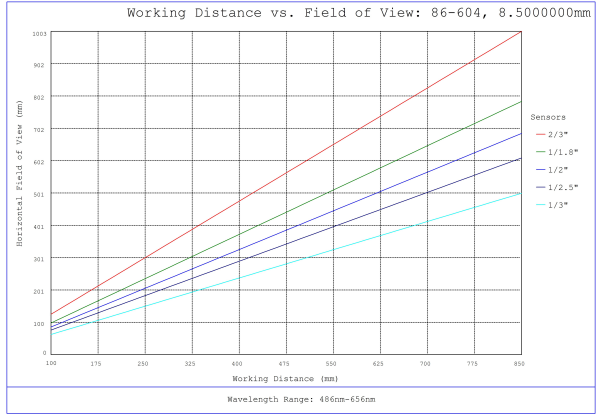
## Technical Information



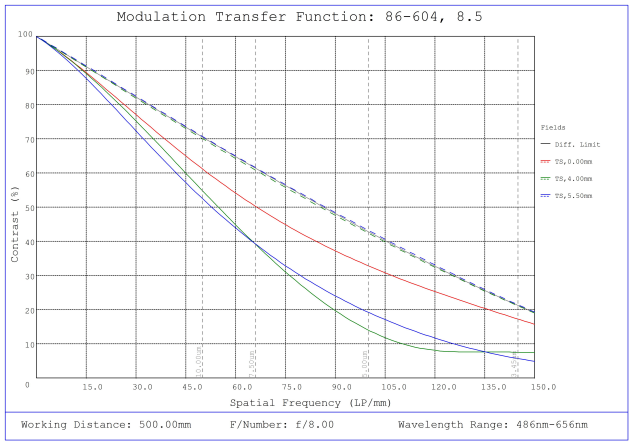
#86-604, 8.5mm, f/8 Ci Series Fixed Focal Length Lens, Distortion Plot



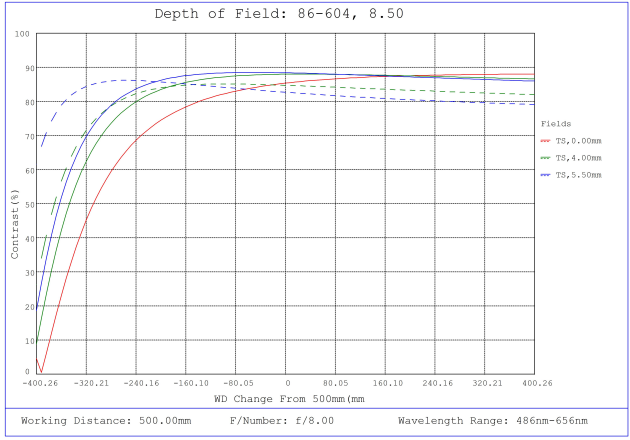
#86-604, 8.5mm, f/8 Ci Series Fixed Focal Length Lens, Relative Illumination Plot



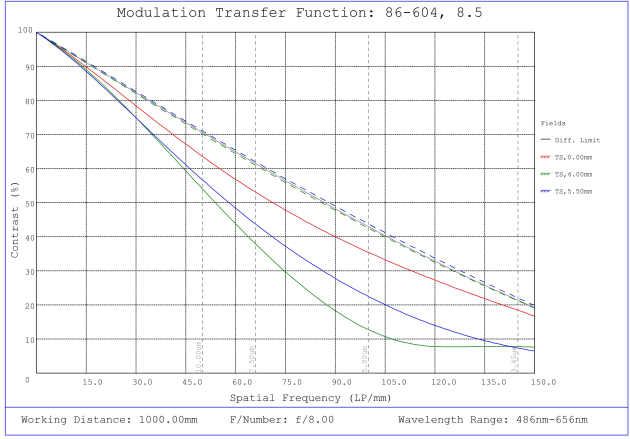
#86-604, 8.5mm, f/8 Ci Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



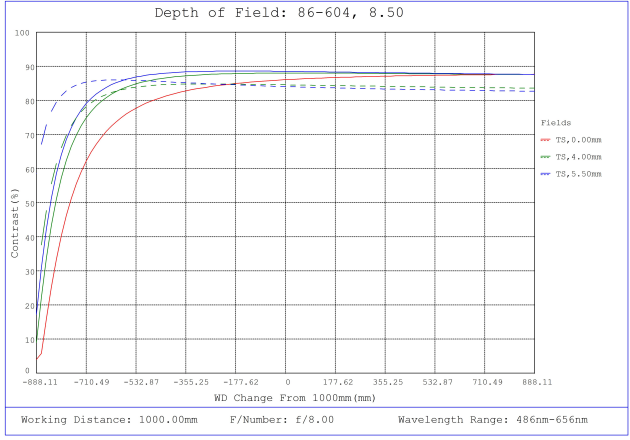
#86-604, 8.5mm, f/8 Ci Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 500mm Working Distance, f8



#86-604, 8.5mm, f/8 Ci Series Fixed Focal Length Lens, Depth of Field Plot, 500mm Working Distance, f8

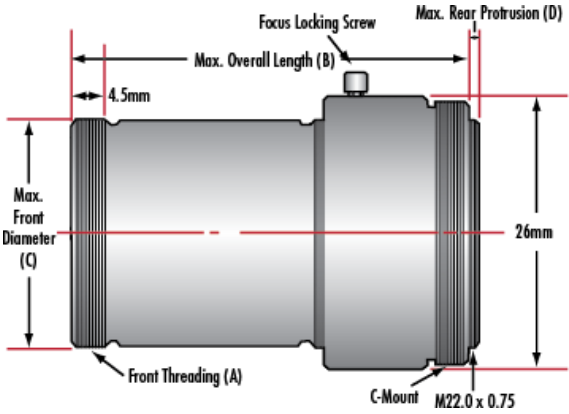


#86-604, 8.5mm, f/8 Ci Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 1000mm Working Distance, f8



#86-604, 8.5mm, f/8 Ci Series Fixed Focal Length Lens, Depth of Field Plot, 1000mm Working Distance, f8

| 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

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