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TECHSPEC® 8.5mm, f/1.8 Ci Series Fixed Focal Length Lens



8.5mm Focal Length

Stock #86-600 **4 In Stock**

⊖ 1 ⊕ €215⁰⁰

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| Volume Pricing | |
|----------------|-------------------------------|
| Qty 1-24 | €215,00 each |
| Qty 25+ | €194,00 each |
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ⓘ 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:**

| | |
|-------|-------------------------------|
| 33.98 | Length (mm): |
| 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° Vertical: 88.9mm - 45° Diagonal: 169.4mm - 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): |
| 0.0215 | Numerical Aperture NA, Object Side: |
| 7 (5) | Number of Elements (Groups): |
| 8.50 | Focal Length FL (mm): |
| 100 - ∞ | Working Distance (mm): |
| f/1.8 | 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

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

- 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.

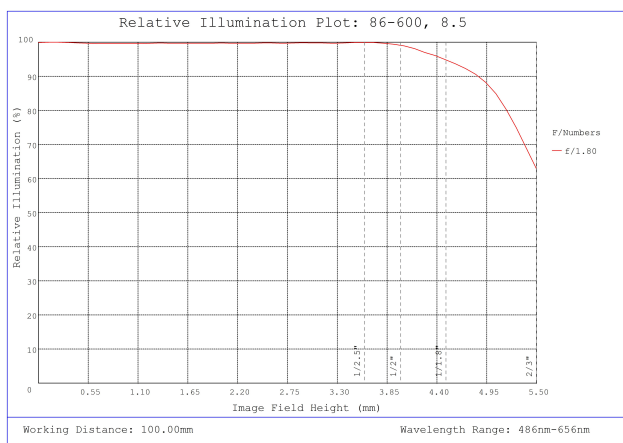
Edmund Optics has created a family of high performance optical designs (the C Series family) and developed 6 customized optomechanical solutions targeted for specific applications. These lens sub-families utilize the same optics as the C Series lenses providing the same optical performance in a variety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

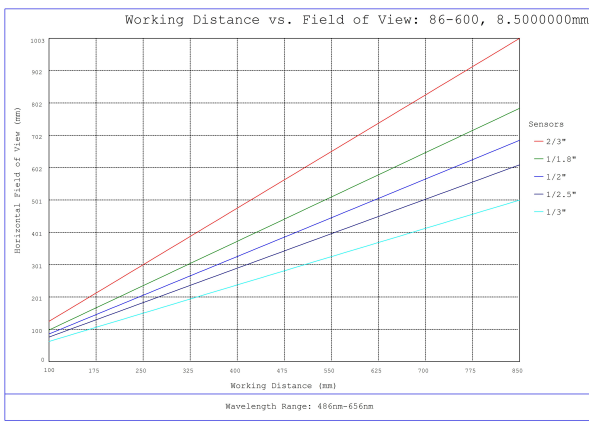
Technical Information



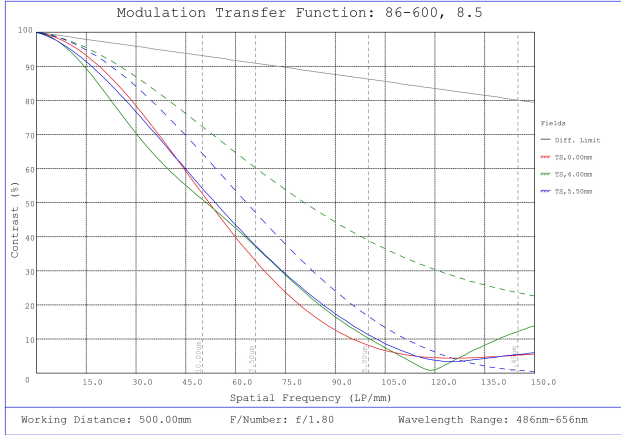
#86-600, 8.5mm, f/1.8 Ci Series Fixed Focal Length Lens, Distortion Plot



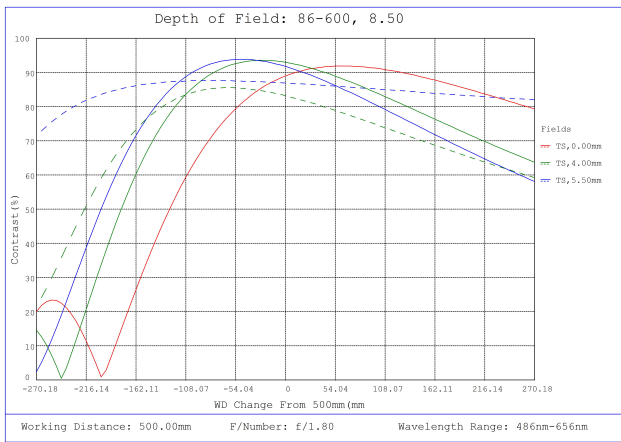
#86-600, 8.5mm, f/1.8 Ci Series Fixed Focal Length Lens, Relative Illumination Plot



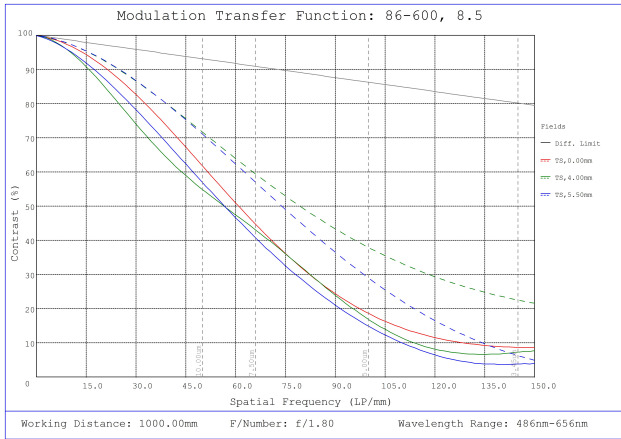
#86-600, 8.5mm, f/1.8 Ci Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



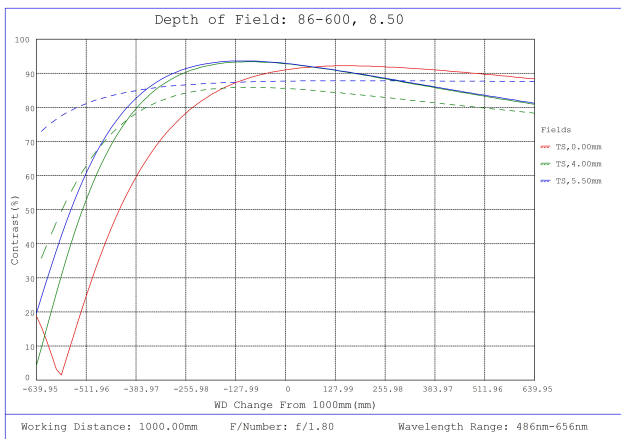
#86-600, 8.5mm, f/1.8 Ci Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 500mm Working Distance, f1.8



#86-600, 8.5mm, f/1.8 Ci Series Fixed Focal Length Lens, Depth of Field Plot, 500mm Working Distance, f1.8



#86-600, 8.5mm, f/1.8 Ci Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 1000mm Working Distance, f1.8



#86-600, 8.5mm, f/1.8 Ci Series Fixed Focal Length Lens, Depth of Field Plot, 1000mm 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