

**TECHSPEC® 12mm, f/11 Ci Series Fixed Focal Length Lens**



12mm Focal Length

Stock **#86-612** **1 In Stock**

⊖ 1 ⊕ €215<sup>00</sup>

**ADD TO CART**

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

|       |                               |
|-------|-------------------------------|
| 29.00 | Length (mm):                  |
| 26.5  | Maximum Diameter (mm):        |
| 26.5  | Outer Diameter (mm):          |
| 31    | Weight (g):                   |
| 0.31  | Maximum Rear Protrusion (mm): |
| 26.50 | Diameter (mm):                |

## Optical Properties

|   |   |
|---|---|
| 80.9mm - 41.2°  | Horizontal Field of View @ Max Sensor Format: |
| Horizontal: 81.3mm - 41.2°<br>Vertical: 60.5mm - 31.3°<br>Diagonal: 102.3mm - 50.5° | Field of View at Max Sensor Format:           |
| 80.9mm - 41.2°  | Horizontal Field of View, 2/3" Sensor:        |
| 65.8mm - 34.0°  | Horizontal Field of View, 1/1.8" Sensor:      |
| 58.3mm - 30.4°  | Horizontal Field of View, 1/2" Sensor:        |
| 52.8mm - 27.6°  | Horizontal Field of View, 1/2.5" Sensor:      |
| 43.5mm - 22.9°  | Horizontal Field of View, 1/3" Sensor:        |
| 32.6mm - 17.2°  | Horizontal Field of View, 1/4" Sensor:        |
| 11.00   | Maximum Image Circle (mm):                    |
| 0.0048  | Numerical Aperture NA, Object Side:           |
| 7 (7)   | Number of Elements (Groups):                  |
| 12.00   | Focal Length FL (mm):                         |
| 100 - ∞   | Working Distance (mm):                        |
| f/11  | Aperture (f/#):                               |
| 425 - 675nm BBAR  | Coating:                                      |
| 425 - 675nm BBAR  | Coating Specification:                        |
| 11.01   | Entrance Pupil Position (mm):                 |
| 17.32   | Object Space Principal Plane (mm):            |
| 1.98  | Image Space Principal Plane (mm):             |
| -2.09   | Maximum Distortion (%):                       |
| -11.38  | Exit Pupil Position (mm):                     |
| VIS   | Lens Wavelength Range:                        |

## Sensor

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

## Threading & Mounting

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

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](#).

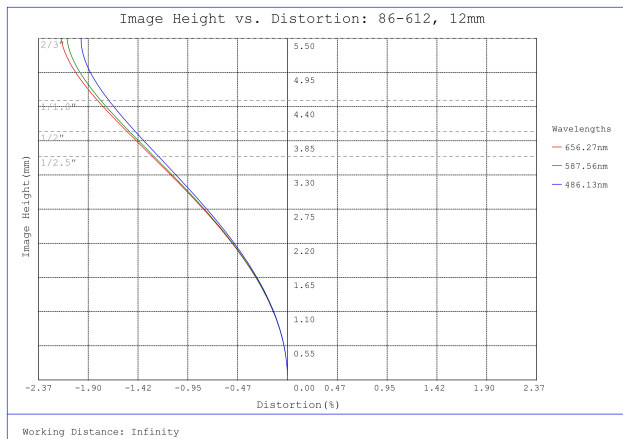
- Up to 2/3", C-Mount Lens
- Up to 7.5 MegaPixels, 2.8 $\mu$ m Pixel Size Sensors
- Instrumentation (Ci) Versions of our C Series Lenses with Streamlined Mechanical Designs and Fixed Apertures
- 3.5mm to 50mm Focal Length
- **Ruggedized (Cr) Designs** Also Available

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.

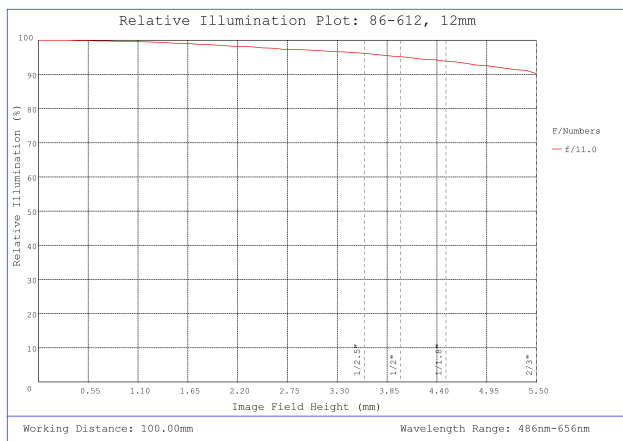
Edmund Optics has created a family of high performance optical designs (the C Series family) and developed 6 customized optomechanical solutions targeted for specific applications. These lens sub-families utilize the same optics as the C Series lenses providing the same optical performance in a variety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

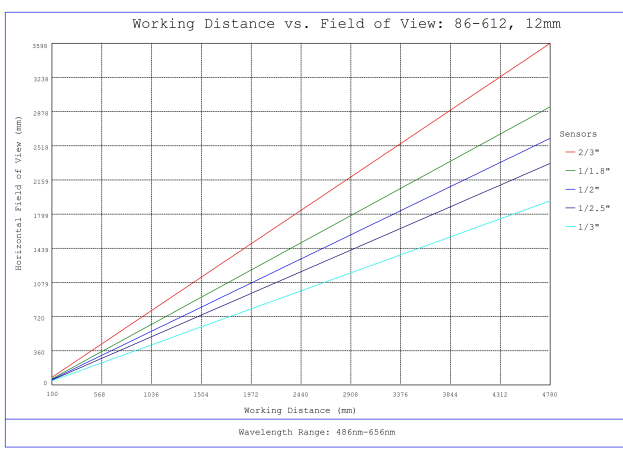
## Technical Information



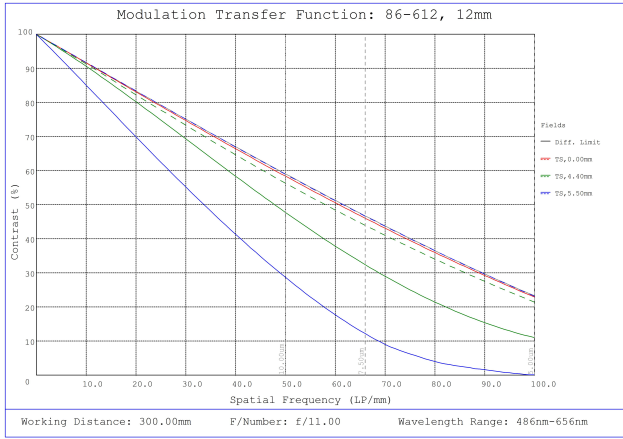
#86-612, 12mm,  $f/11$  Ci Series Fixed Focal Length Lens, Distortion Plot



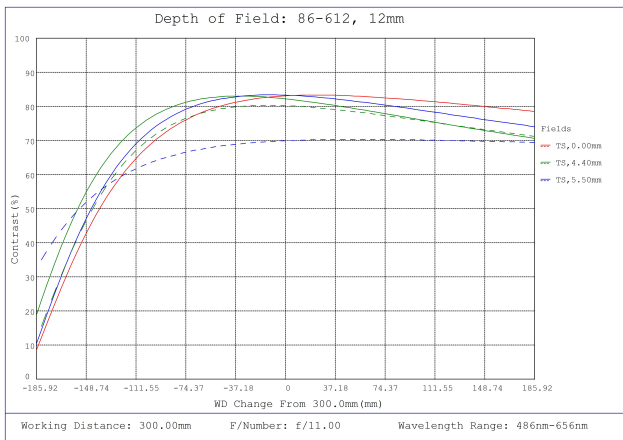
#86-612, 12mm,  $f/11$  Ci Series Fixed Focal Length Lens, Relative Illumination Plot



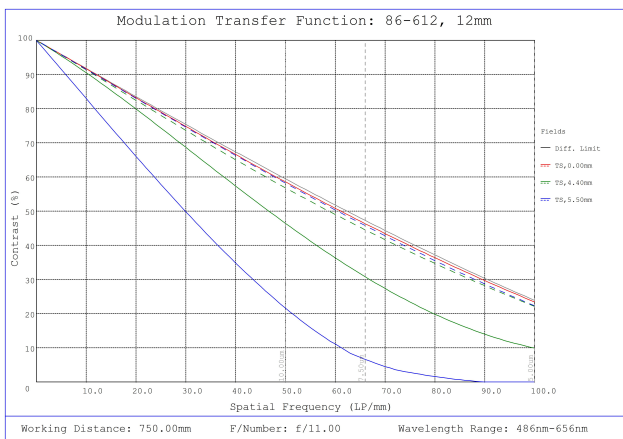
#86-612, 12mm, f/11 Ci Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



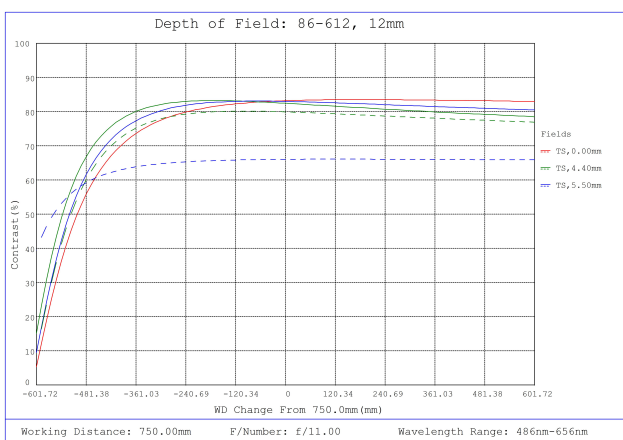
#86-612, 12mm, f/11 Ci Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 300mm Working Distance, f11



#86-612, 12mm, f/11 Ci Series Fixed Focal Length Lens, Depth of Field Plot, 300mm Working Distance, f11



#86-612, 12mm, f/11 Ci Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 750mm Working Distance, f11



#86-612, 12mm, f/11 Ci Series Fixed Focal Length Lens, Depth of Field Plot, 750mm Working Distance, f11

| 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