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**TECHSPEC® 4mm f/4, UCi Series Fixed Focal Length Lens**



4mm UCi Series Fixed Focal Length Lens



Stock #33-857 [CONTACT US](#)

⊖ 1 ⊕ A\$341<sup>00</sup>

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**General**

UCi Series	<b>Product Family:</b>
Fixed Focal Length Lens	<b>Type:</b>
No	<b>IR Cut Filter:</b>

**Physical & Mechanical Properties**

Fixed	<b>Iris Option:</b>
48.30	<b>Length (mm):</b>
40	<b>Maximum Diameter (mm):</b>
40	<b>Outer Diameter (mm):</b>
44	<b>Weight (g):</b>
0	<b>Maximum Rear Protrusion (mm):</b>

## Optical Properties

**Horizontal Field of View @ Max Sensor Format:**  
23.0mm - 84.8°

**Field of View at Max Sensor Format:**  
Horizontal: 22.9mm - 84.8°  
Vertical: 15.6mm - 65.4°  
Diagonal: 33.6mm - 101.7°

**Horizontal Field of View, 1/2" Sensor:**  
23.0mm - 84.8°

**Horizontal Field of View, 1/2.5" Sensor:**  
20.0mm - 77.8°

**Horizontal Field of View, 1/3" Sensor:**  
15.6mm - 65.4°

**Horizontal Field of View, 1/4" Sensor:**  
11.2mm - 49.7°

**Maximum Image Circle (mm):**  
8.00

**Numerical Aperture NA, Object Side:**  
0.0404

**Number of Elements (Groups):**  
8 (7)

**Focal Length FL (mm):**  
4.00

**Working Distance (mm):**  
0 - ∞

**Aperture (f/#):**  
f/4.0

**Coating:**  
λ/4 MgF<sub>2</sub>

**Coating Specification:**  
λ/4 MgF<sub>2</sub>

**Entrance Pupil Position (mm):**  
12.69

**Object Space Principal Plane (mm):**  
16.04

**Image Space Principal Plane (mm):**  
5.84

**Maximum Distortion (%):**  
-20.44

**Exit Pupil Position (mm):**  
-12.68

**Lens Wavelength Range:**  
VIS

## Sensor

**Optimized Sensor Format:**  
1/2.5"

**Maximum Sensor Format:**  
1/2"

**Pixel Size (μm):**  
1.85

## Threading & Mounting

**Filter Thread:**  
M62 x 0.75 (Male)

**Filter Thread Adapter:**  
[#33-308 \(Required\)](#)

**Mount:**  
S-Mount (M12 x 0.5)

## Environmental & Durability Factors

**Storage Temperature (°C):**

## Regulatory Compliance

[View](#) Certificate of Conformance:

## Product Details

- Up to 1/1.8", C-Mount, S-Mount Lens
- Up to 12 MegaPixels, 1.85µm Pixel Size Sensors
- Instrumentation (UCi) versions of our UC Series Lenses with Streamlined Mechanical Designs and Fixed Apertures
- 4mm to 35mm Focal Length

TECHSPEC® UCi Series Fixed Focal Length Lenses utilize the same optics as the TECHSPEC UC Series Lenses and feature 4K resolution. These lenses are designed for small pixels  $\leq 2.2\mu\text{m}$  and offer a wide range of fixed apertures for a variety of applications. While optimized for 1/2.5" sensors, many focal length options can be used on sensors up to 1/1.8". TECHSPEC® UCi Series Fixed Focal Length Lenses are ideal for OEM applications that require small, robust, and lightweight imaging solutions.

**Note:** For adjustable aperture options, see our [TECHSPEC® UC Series Fixed Focal Length Lenses](#).

Edmund Optics has created a family of high-performance ultra-compact optical designs (the UC Series family) and developed 3 customized optomechanical solutions targeted for specific applications. These lens sub-families utilize the same optics as the UC Series lenses providing the same optical performance in a variety of optomechanical solutions to meet your application requirements:

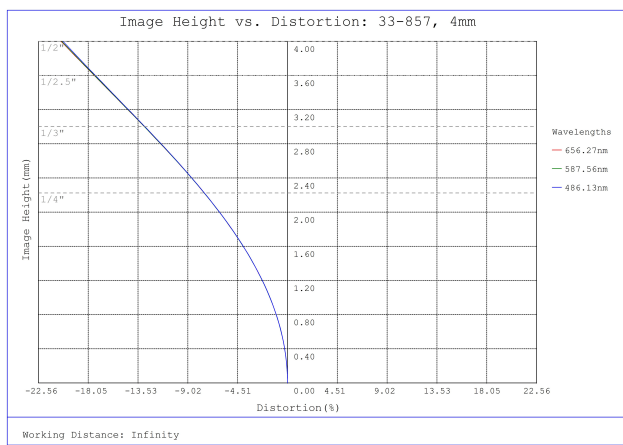
**UC Series:** Features locking cam focus and iris adjustment in an ultra-compact design and is the most adjustable version of these optical designs; they are the typical high-quality machine vision lenses.

**UCi Series:** Simplified mechanics featuring fixed apertures with compact housing. [Industrial Ruggedization](#) for reduced size, cost, and locked focus.

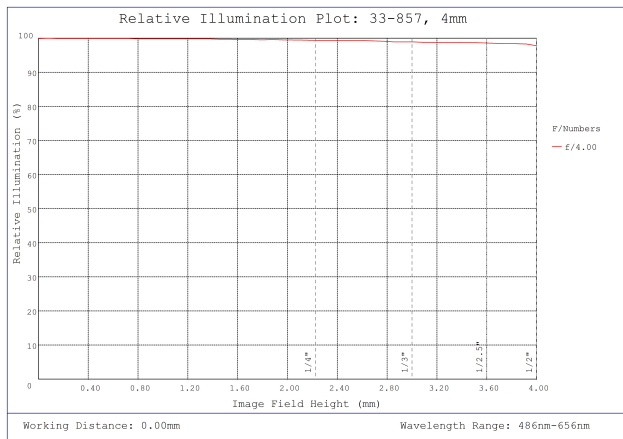
**UCr Series:** All optics glued in place and a locking C-clamp focus ring. [Stabilized Ruggedization](#) for reduced pixel shift and improved focus stability.

**UCw Series:** Waterproof, designed to meet IEC [Ingress Protection](#) Code IPX7 to withstand exposure to water up to 1 meter depth for 30 minutes.

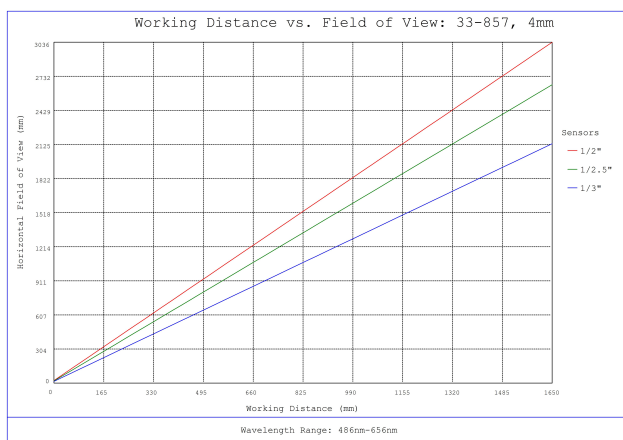
## Technical Information



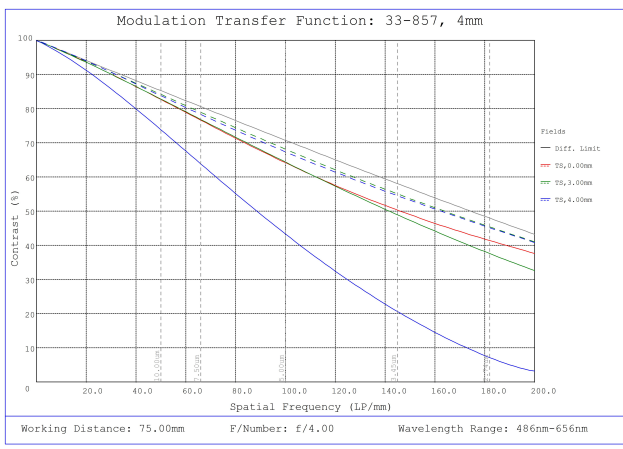
#33-857, 4mm f/4, UCi Series Fixed Focal Length Lens, Distortion Plot



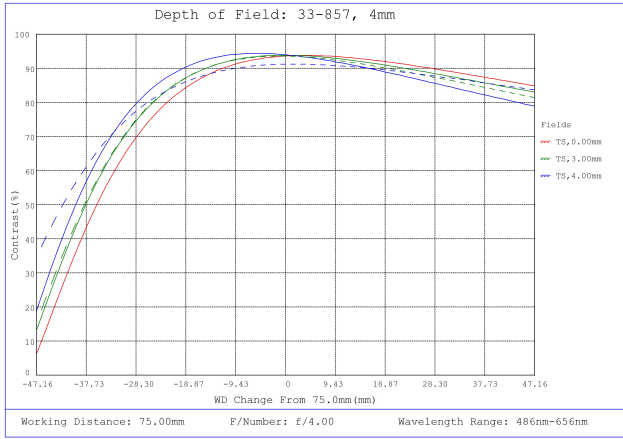
#33-857, 4mm f/4, UCi Series Fixed Focal Length Lens, Relative Illumination Plot



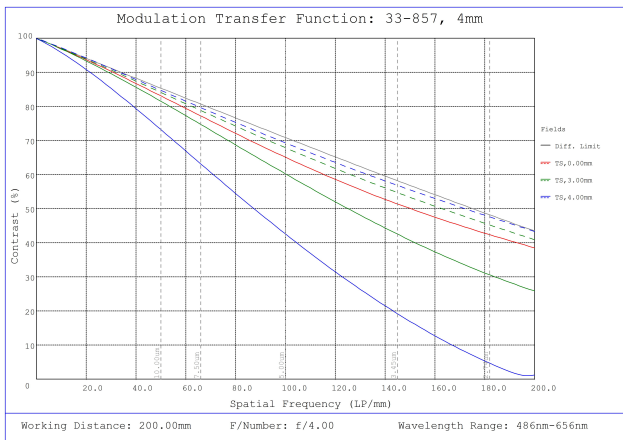
#33-857, 4mm f/4, UCi Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



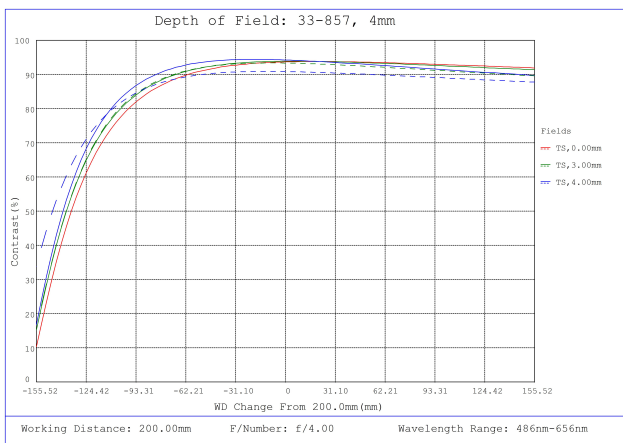
#33-857, 4mm f/4, UCI Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 75mm Working Distance, f4



#33-857, 4mm f/4, UCI Series Fixed Focal Length Lens, Depth of Field Plot, 75mm Working Distance, f4



#33-857, 4mm f/4, UCI Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 200mm Working Distance, f4



#33-857, 4mm f/4, UCI Series Fixed Focal Length Lens, Depth of Field Plot, 200mm Working Distance, f4

## Compatible Cameras