

**TECHSPEC® 4mm, f/8 UCi Series Fixed Focal Length Lens**



4mm UCi Series Fixed Focal Length Lens



Stock #33-859 **5 In Stock**

C\$378.<sup>00</sup>

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**General**

UCi Series **Product Family:**  
Fixed Focal Length Lens **Type:**

No **IR Cut Filter:**

**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

23.0mm - 84.8°	<b>Horizontal Field of View @ Max Sensor Format:</b>
Horizontal: 22.9mm - 84.8° Vertical: 15.6mm - 65.4° Diagonal: 33.6mm - 101.7°	<b>Field of View at Max Sensor Format:</b>
23.0mm - 84.8°	<b>Horizontal Field of View, 1/2" Sensor:</b>
20.0mm - 77.8°	<b>Horizontal Field of View, 1/2.5" Sensor:</b>
15.6mm - 65.4°	<b>Horizontal Field of View, 1/3" Sensor:</b>
11.2mm - 49.7°	<b>Horizontal Field of View, 1/4" Sensor:</b>
8.00	<b>Maximum Image Circle (mm):</b>
0.0202	<b>Numerical Aperture NA, Object Side:</b>
8 (7)	<b>Number of Elements (Groups):</b>
4.00	<b>Focal Length FL (mm):</b>
0 - ∞	<b>Working Distance (mm):</b>
f/8.0	<b>Aperture (f#):</b>
N4 MgF <sub>2</sub>	<b>Coating:</b>
N4 MgF <sub>2</sub>	<b>Coating Specification:</b>
12.69	<b>Entrance Pupil Position (mm):</b>
16.04	<b>Object Space Principal Plane (mm):</b>
5.84	<b>Image Space Principal Plane (mm):</b>
-20.44	<b>Maximum Distortion (%):</b>
-12.68	<b>Exit Pupil Position (mm):</b>
VS	<b>Lens Wavelength Range:</b>

## Sensor

1/2.5"	<b>Optimized Sensor Format:</b>
1/2"	<b>Maximum Sensor Format:</b>
1.85	<b>Pixel Size (μm):</b>

## Threading & Mounting

M62 x 0.75 (Male)	<b>Filter Thread:</b>
<a href="#">#33-308 (Required)</a>	<b>Filter Thread Adapter:</b>
S-Mount (M12 x 0.5)	<b>Mount:</b>

## Environmental & Durability Factors

Storage Temperature (°C):

-20 to +60

Type of Ruggedization:

Industrial (Fixed Aperture with Simplified Mechanics)

## Regulatory Compliance

Certificate of Conformance:

[View](#)

## 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:

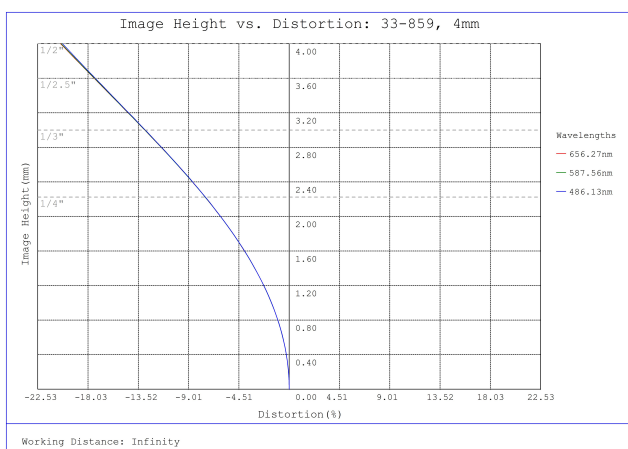
**UC Series:** Features locking cam focus and iris adjustment in an ultra-compact design and is the most adjustable version of these optical designs; they are the typical high-quality machine vision lenses.

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

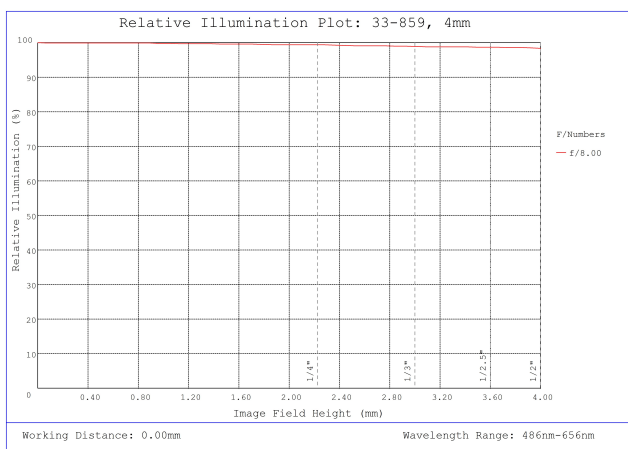
**UCr Series:** All optics glued in place and a locking C-clamp focus ring. [Stabilized Ruggedization](#) for reduced pixel shift and improved focus stability.

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

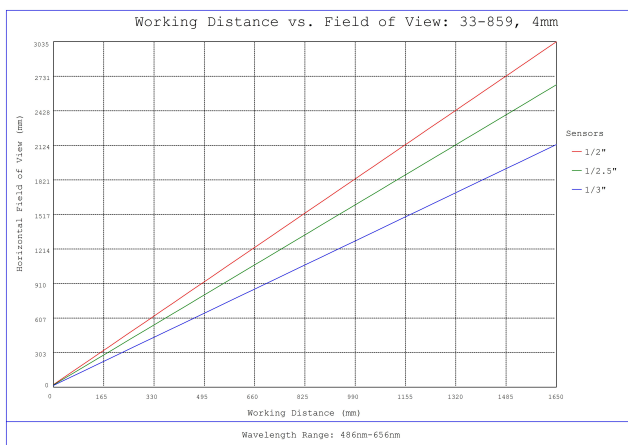
## Technical Information



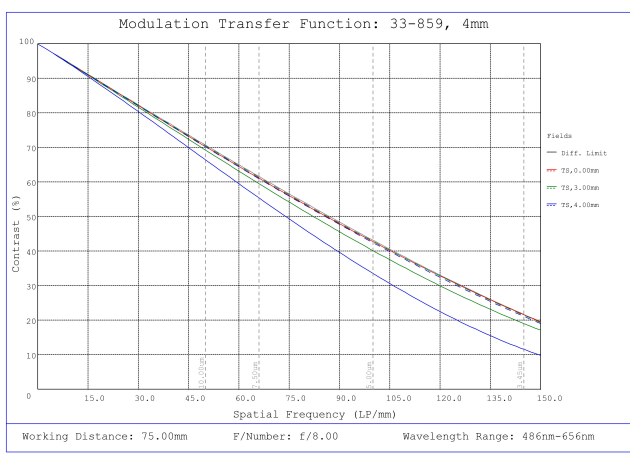
#33-859, 4mm, f/8 UCi Series Fixed Focal Length Lens, Distortion Plot



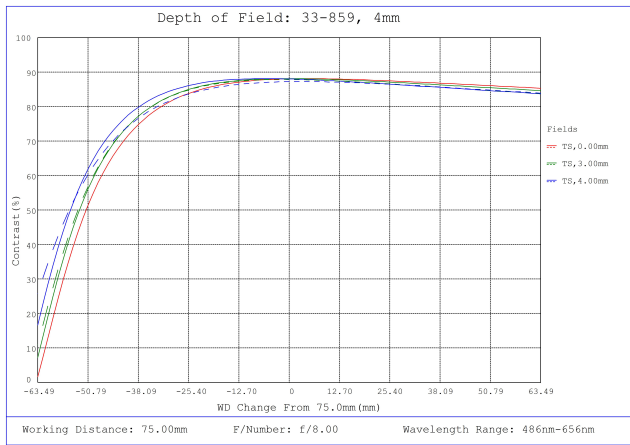
#33-859, 4mm, f/8 UCi Series Fixed Focal Length Lens, Relative Illumination Plot



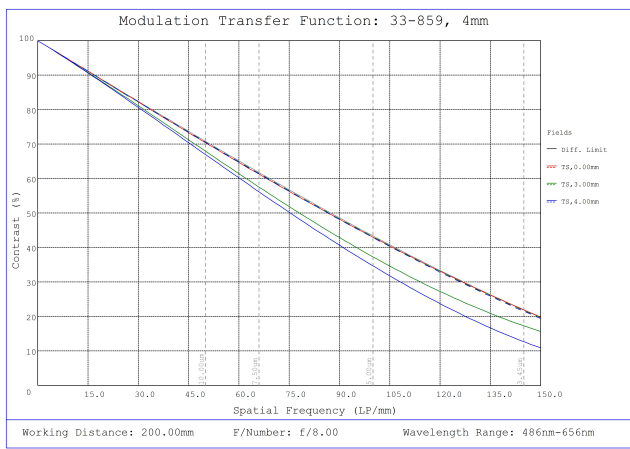
#33-859, 4mm, f/8 UCi Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



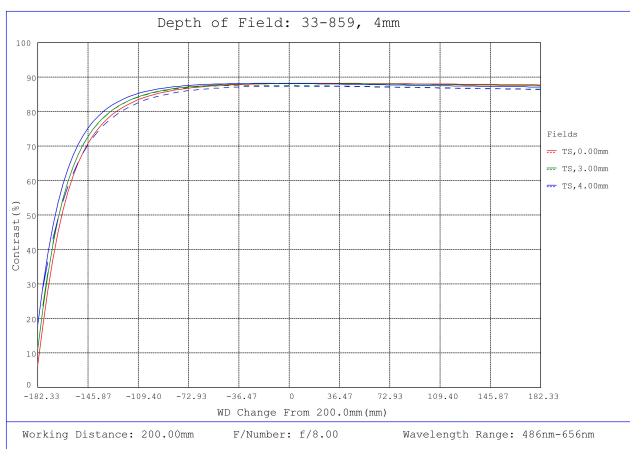
#33-859, 4mm, f/8 UCi Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 75mm Working Distance, f8



#33-859, 4mm, f/8 UCi Series Fixed Focal Length Lens, Depth of Field Plot, 75mm Working Distance, f8



#33-859, 4mm, f/8 UCi Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 200mm Working Distance, f8



#33-859, 4mm, f/8 UCi Series Fixed Focal Length Lens, Depth of Field Plot, 200mm Working Distance, f8

## Compatible Cameras