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## TECHSPEC® 6mm, f/1.85 UCi Series Fixed Focal Length Lens



6mm UCi Series Fixed Focal Length Lens



Stock #33-862 **5 In Stock**

− 1 + €235<sup>00</sup>

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### Product Downloads

#### General

UCi Series **Product Family:**

Fixed Focal Length Lens **Type:**

No **IR Cut Filter:**

**Imaging Lens Type:**  
High Performance Lens with Compact Form Factor  
and Fixed Aperture

## Physical & Mechanical Properties

**Iris Option:**  
Fixed

**Length (mm):**  
47.30

**Maximum Diameter (mm):**  
30.5

**Outer Diameter (mm):**  
30.5

**Weight (g):**  
52

**Maximum Rear Protrusion (mm):**  
0

## Optical Properties

**Horizontal Field of View @ Max Sensor Format:**  
72.8mm - 60.0°

**Field of View at Max Sensor Format:**  
Horizontal: 72.8mm - 60°  
Vertical: 52.7mm - 45.4°  
Diagonal: 95.5mm - 73.8°

**Horizontal Field of View, 1/2" Sensor:**  
72.8mm - 60.0°

**Horizontal Field of View, 1/2.5" Sensor:**  
65.0mm - 54.6°

**Horizontal Field of View, 1/3" Sensor:**  
52.7mm - 45.4°

**Horizontal Field of View, 1/4" Sensor:**  
38.7mm - 34.2°

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

**Numerical Aperture NA, Object Side:**  
0.0254

**Number of Elements (Groups):**  
9 (8)

**Focal Length FL (mm):**  
6.00

**Working Distance (mm):**  
50 - ∞

**Aperture (f/#):**  
f/1.85

**Coating:**  
M4 MgF<sub>2</sub>

**Coating Specification:**  
M4 MgF<sub>2</sub>

**Entrance Pupil Position (mm):**  
12.61

**Object Space Principal Plane (mm):**  
17.55

**Image Space Principal Plane (mm):**  
4.85

**Maximum Distortion (%):**  
-11.2

**Exit Pupil Position (mm):**  
-23.26

**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:**  
M30.5 x 0.50 (Male)

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

## 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:

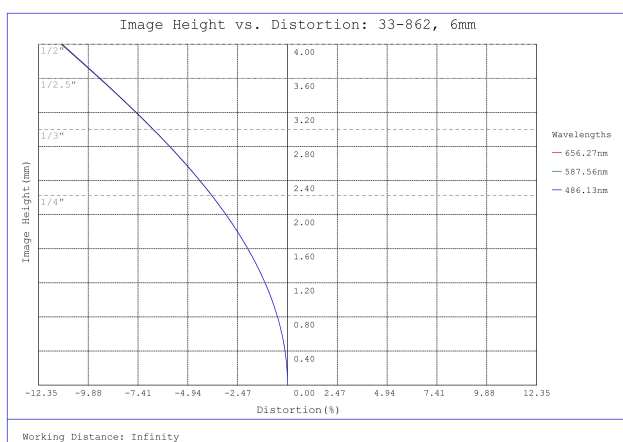
**UC Series:** Features locking cam focus and iris adjustment in an ultra-compact design and is the most adjustable version of these optical designs; they are the typical high-quality machine vision lenses.

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

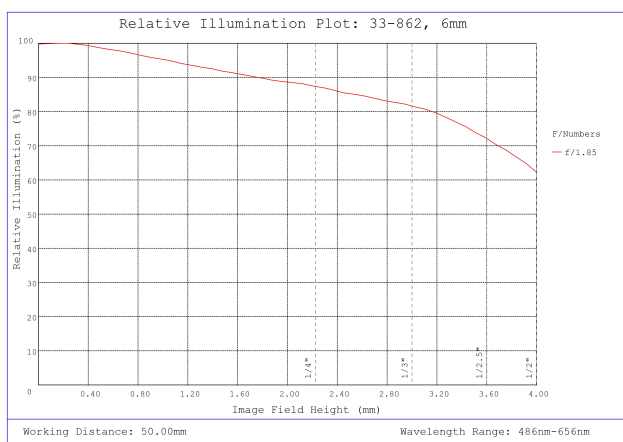
**UCr Series:** All optics glued in place and a locking C-clamp focus ring. [Stabilized Ruggedization](#) for reduced pixel shift and improved focus stability.

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

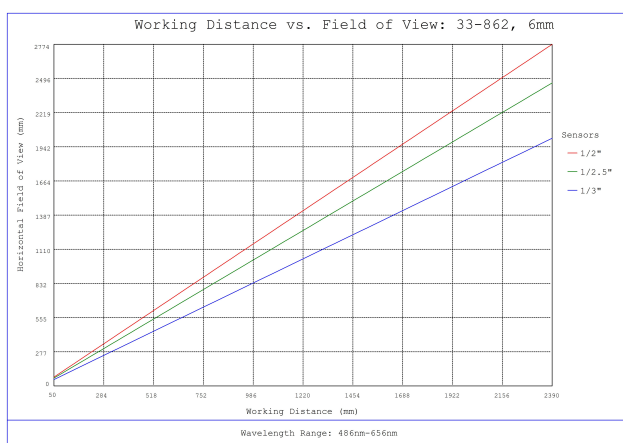
## Technical Information



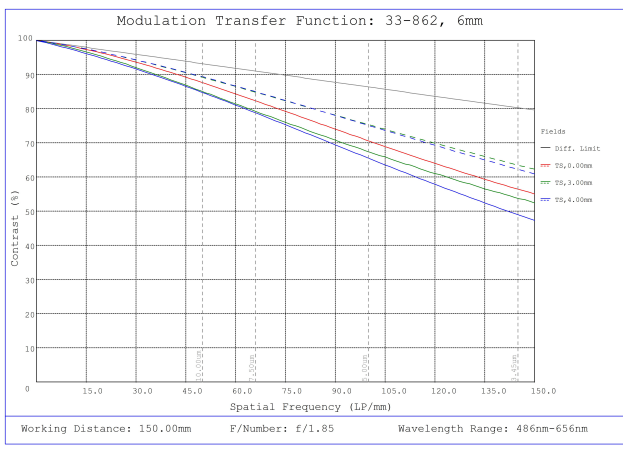
#33-862, 6mm, f/1.85 UCi Series Fixed Focal Length Lens, Distortion Plot



#33-862, 6mm, f/1.85 UCi Series Fixed Focal Length Lens, Relative Illumination Plot



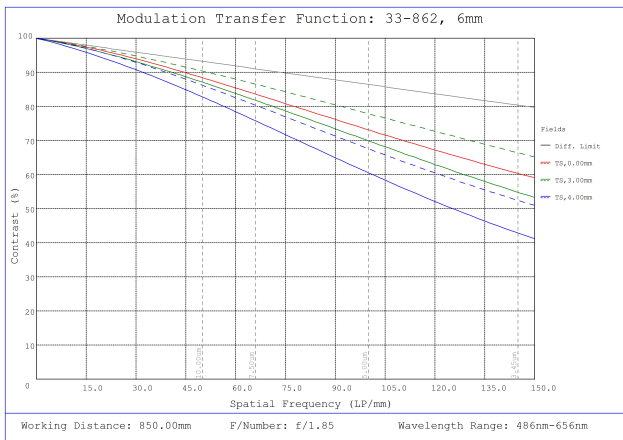
#33-862, 6mm, f/1.85 UCi Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



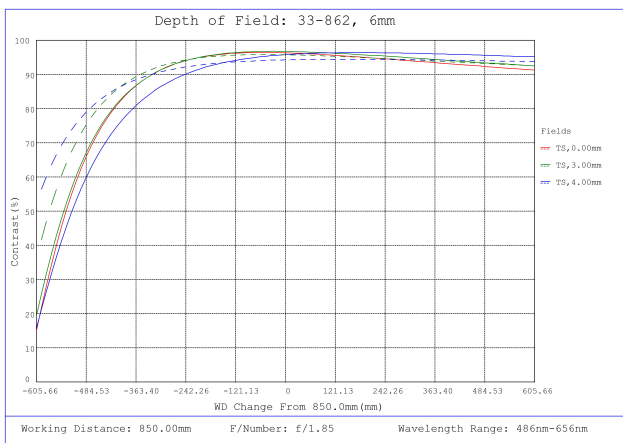
#33-862, 6mm, f/1.85 UCI Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 150mm Working Distance, f1.8



#33-862, 6mm, f/1.85 UCI Series Fixed Focal Length Lens, Depth of Field Plot, 150mm Working Distance, f1.8



#33-862, 6mm, f/1.85 UCI Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 850mm Working Distance, f1.8



#33-862, 6mm, f/1.85 UCI Series Fixed Focal Length Lens, Depth of Field Plot, 850mm Working Distance, f1.8

## Compatible Cameras