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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 **\$309⁰⁰**

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Volume Pricing

Qty 1+	\$309.00 each
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General

UCi Series **Product Family:**

Fixed Focal Length Lens **Type:**

No **IR Cut Filter:**

High Performance Lens with Compact Form Factor **Imaging Lens Type:**

and Fixed Aperture

Physical & Mechanical Properties

Fixed 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 MgF₂

Coating Specification:

M4 MgF₂

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:

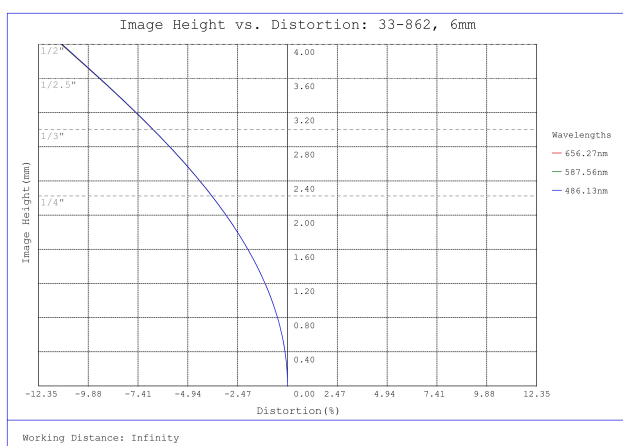
UC Series: Features locking cam focus and iris adjustment in an ultra-compact design and is the most adjustable version of these optical designs; they are the typical high-quality machine vision lenses.

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

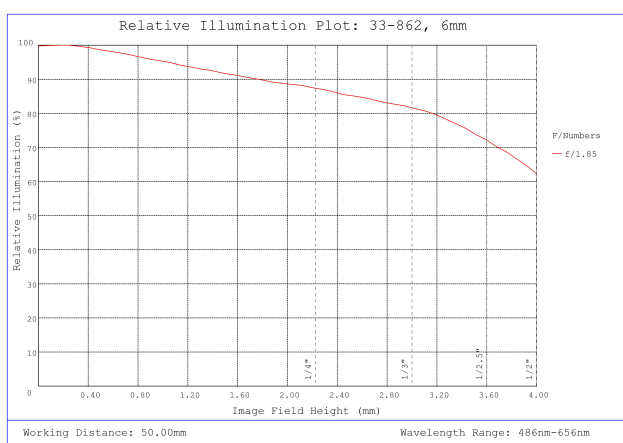
UCr Series: All optics glued in place and a locking C-clamp focus ring. [Stabilized Ruggedization](#) for reduced pixel shift and improved focus stability.

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

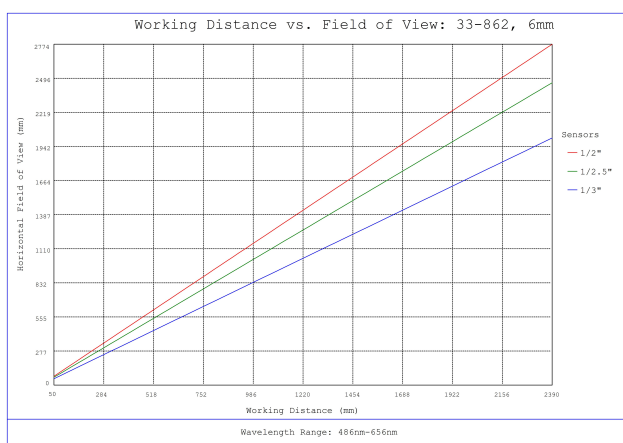
Technical Information



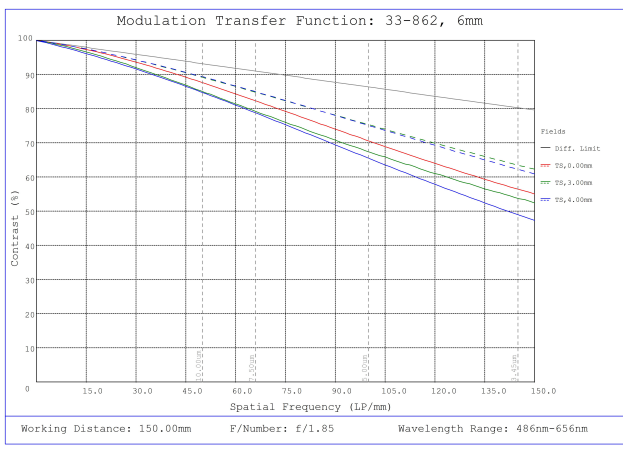
#33-862, 6mm, f/1.85 UCi Series Fixed Focal Length Lens, Distortion Plot



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



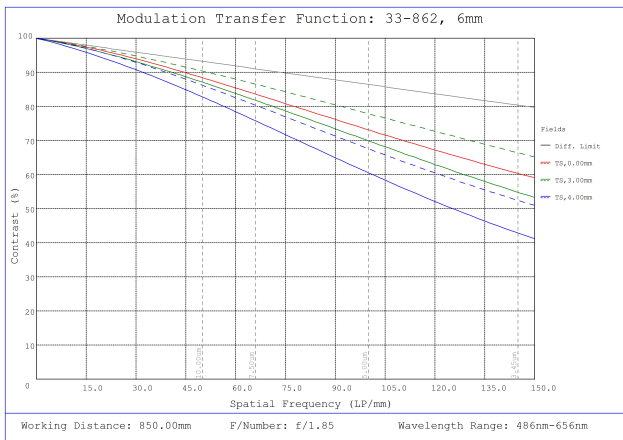
#33-862, 6mm, f/1.85 UCi Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



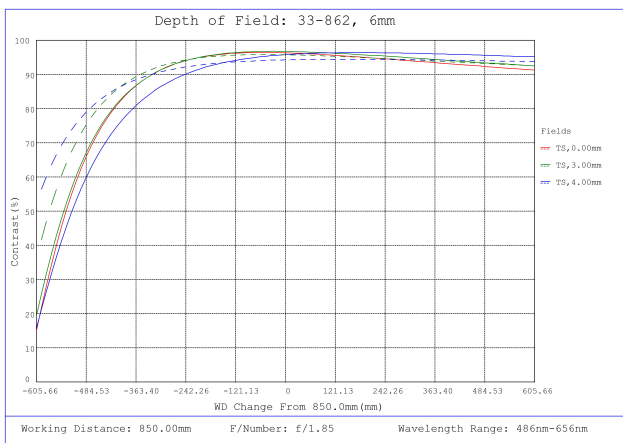
#33-862, 6mm, f/1.85 UCI Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 150mm Working Distance, f1.8



#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