

**TECHSPEC® 16mm, f/16 UCi Series Fixed Focal Length Lens**



16mm UCi Series Fixed Focal Length Lens



Stock **#33-889** **2 In Stock**

⊖ 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>
26.70	<b>Length (mm):</b>
18	<b>Maximum Diameter (mm):</b>
25	<b>Outer Diameter (mm):</b>
13	<b>Weight (g):</b>
0	<b>Maximum Rear Protrusion (mm):</b>
25.5	<b>Maximum Length (mm):</b>

## Optical Properties

98.5mm - 25.3°	<b>Horizontal Field of View @ Max Sensor Format:</b>
Horizontal: 93.6mm - 25.3° Vertical: 70.2mm - 19.1° Diagonal: 117mm - 31.3°	<b>Field of View at Max Sensor Format:</b>
93.6mm - 25.3°	<b>Horizontal Field of View, 1/1.8" Sensor:</b>
83.2mm - 22.5°	<b>Horizontal Field of View, 1/2" Sensor:</b>
75.4mm - 20.5°	<b>Horizontal Field of View, 1/2.5" Sensor:</b>
62.4mm - 17.0°	<b>Horizontal Field of View, 1/3" Sensor:</b>
46.8mm - 12.8°	<b>Horizontal Field of View, 1/4" Sensor:</b>
9.00	<b>Maximum Image Circle (mm):</b>
0.0023	<b>Numerical Aperture NA, Object Side:</b>
7 (5)	<b>Number of Elements (Groups):</b>
16.00	<b>Focal Length FL (mm):</b>
200 - ∞	<b>Working Distance (mm):</b>
f/16	<b>Aperture (f/#):</b>
M4 MgF <sub>2</sub>	<b>Coating:</b>
M4 MgF <sub>2</sub>	<b>Coating Specification:</b>
10.68	<b>Entrance Pupil Position (mm):</b>
20.18	<b>Object Space Principal Plane (mm):</b>
-6.67	<b>Image Space Principal Plane (mm):</b>
-0.53	<b>Maximum Distortion (%):</b>
-29.94	<b>Exit Pupil Position (mm):</b>
VIS	<b>Lens Wavelength Range:</b>

## Sensor

1/2.5"	<b>Optimized Sensor Format:</b>
1/1.8"	<b>Maximum Sensor Format:</b>
1.85	<b>Pixel Size (µm):</b>

## Threading & Mounting

M18 x0.50 (Male)	<b>Filter Thread:</b>
S-Mount (M12 x0.5)	<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:

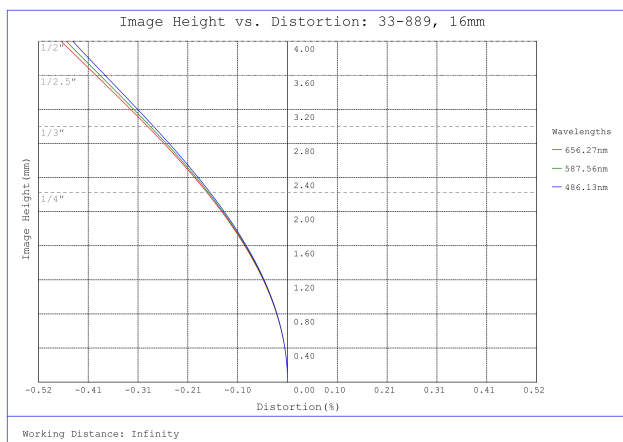
**UC Series:** Features locking cam focus and iris adjustment in an ultra-compact design and is the most adjustable version of these optical designs; they are the typical high-quality machine vision lenses.

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

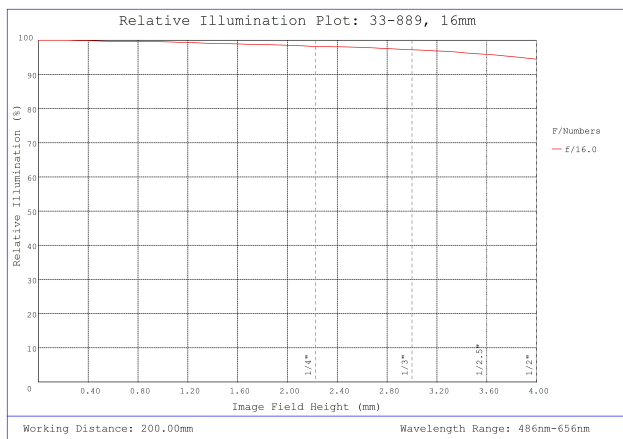
**UCr Series:** All optics glued in place and a locking C-clamp focus ring. [Stabilized Ruggedization](#) for reduced pixel shift and improved focus stability.

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

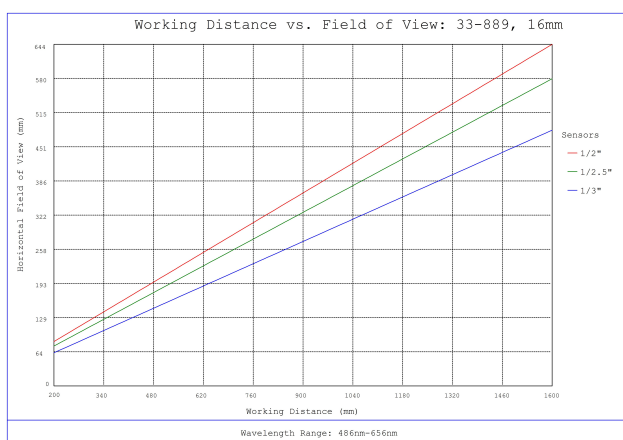
## Technical Information



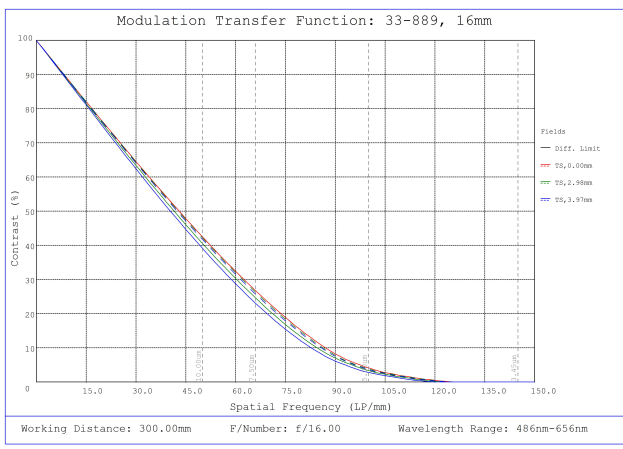
#33-889, 16mm, f/16 UCi Series Fixed Focal Length Lens, Distortion Plot



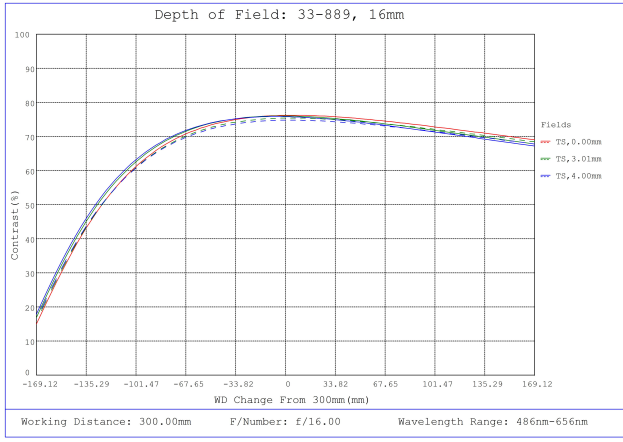
#33-889, 16mm, f/16 UCi Series Fixed Focal Length Lens, Relative Illumination Plot



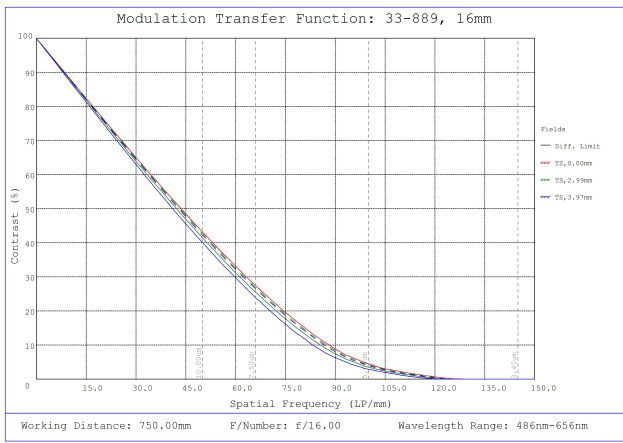
#33-889, 16mm, f/16 UCi Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



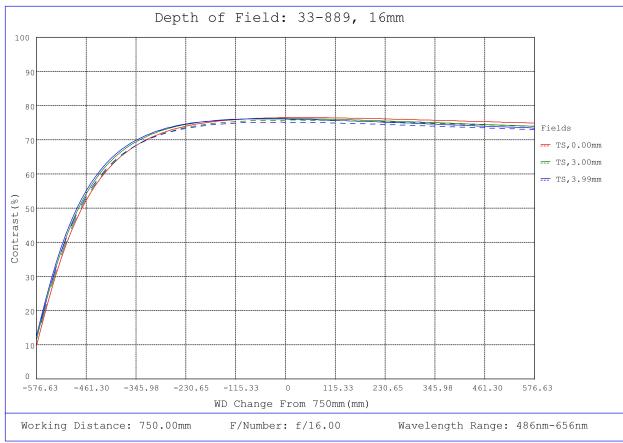
#33-889, 16mm, f/16 UCI Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 300mm Working Distance, f16



#33-889, 16mm, f/16 UCI Series Fixed Focal Length Lens, Depth of Field Plot, 300mm Working Distance, f16



#33-889, 16mm, f/16 UCI Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 750mm Working Distance, f16



#33-889, 16mm, f/16 UCI Series Fixed Focal Length Lens, Depth of Field Plot, 750mm Working Distance, f16

## Compatible Cameras