

**TECHSPEC® 16mm, f/1.8 UCi Series Fixed Focal Length Lens**



16mm UCi Series Fixed Focal Length Lens



Stock #33-883 **20+ In Stock**

1 **\$309<sup>00</sup>**

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Qty 1+	\$309.00 each
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**General**

UCi Series **Series:**

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):

26.70

Maximum Diameter (mm):

18

Outer Diameter (mm):

25

Weight (g):

13

Maximum Rear Protrusion (mm):

0

Maximum Length (mm):

25.5

## Optical Properties

Horizontal Field of View @ Max Sensor Format:

98.5mm - 25.3°

Field of View at Max Sensor Format:

Horizontal: 93.6mm - 25.3°

Vertical: 70.2mm - 19.1°

Diagonal: 117mm - 31.3°

Horizontal Field of View, 1/1.8" Sensor:

93.6mm - 25.3°

Horizontal Field of View, 1/2" Sensor:

83.2mm - 22.5°

Horizontal Field of View, 1/2.5" Sensor:

75.4mm - 20.5°

Horizontal Field of View, 1/3" Sensor:

62.4mm - 17.0°

Horizontal Field of View, 1/4" Sensor:

46.8mm - 12.8°

Maximum Image Circle (mm):

9.00

Numerical Aperture NA, Object Side:

0.0207

Number of Elements (Groups):

7 (5)

Focal Length FL (mm):

16.00

Working Distance (mm):

200 - ∞

Aperture (f/#):

f/1.8

Coating:

M4 MgF<sub>2</sub>

Coating Specification:

M4 MgF<sub>2</sub>

Entrance Pupil Position (mm):

10.68

Object Space Principal Plane (mm):

20.18

Image Space Principal Plane (mm):

-6.67

Maximum Distortion (%):

-0.53

Exit Pupil Position (mm):

-29.94

Lens Wavelength Range:

VIS

## Sensor

Optimized Sensor Format:

1/2.5"

Maximum Sensor Format:

1/1.8"

Pixel Size (µm):

1.85

## Threading & Mounting

Filter Thread:

M18 x0.50 (Male)

S-Mount (M12 x0.5)

Mount:

## Environmental & Durability Factors

-20 to +60

Storage Temperature (°C):

Type of Ruggedization:  
Industrial (Fixed Aperture with Simplified Mechanics)

## 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:

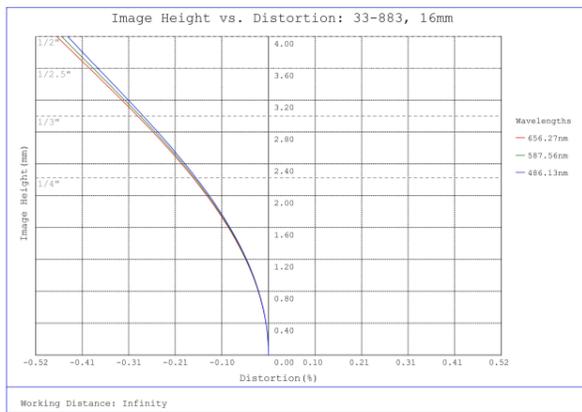
**UC Series:** Features locking cam focus and iris adjustment in an ultra-compact design and is the most adjustable version of these optical designs; they are the typical high-quality machine vision lenses.

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

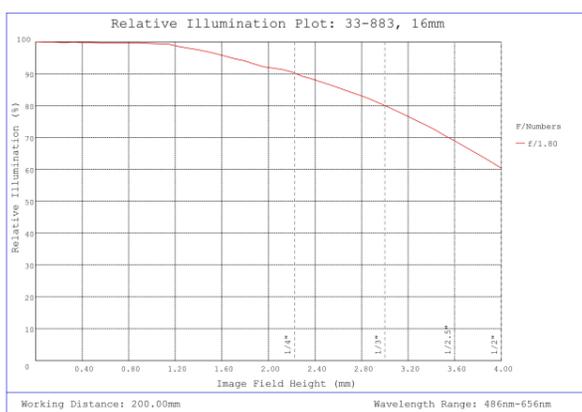
**UCr Series:** All optics glued in place and a locking C-clamp focus ring. [Stabilized Ruggedization](#) for reduced pixel shift and improved focus stability.

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

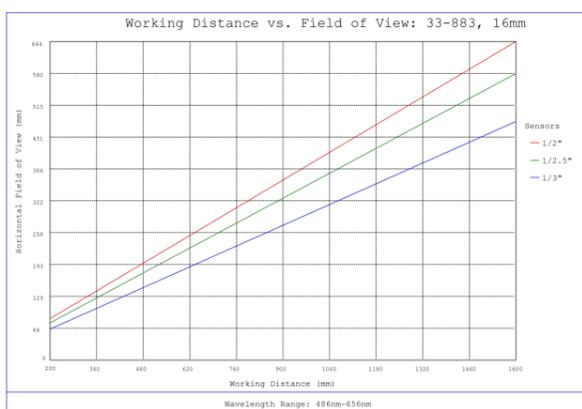
## Technical Information



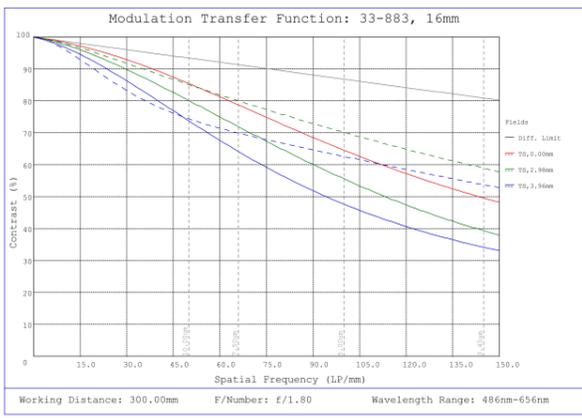
#33-883, 16mm, f/1.8 UCi Series Fixed Focal Length Lens, Distortion Plot



#33-883, 16mm, f/1.8 UCi Series Fixed Focal Length Lens, Relative Illumination Plot



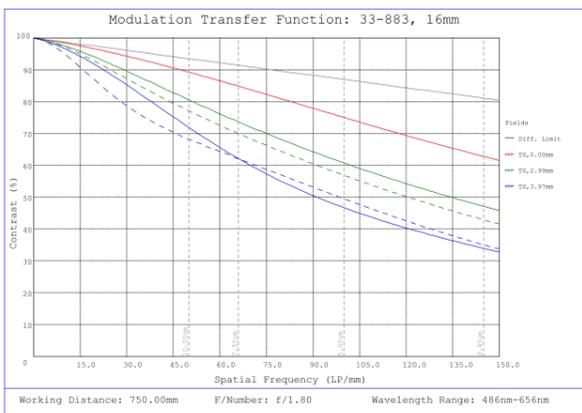
#33-883, 16mm, f/1.8 UCi Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



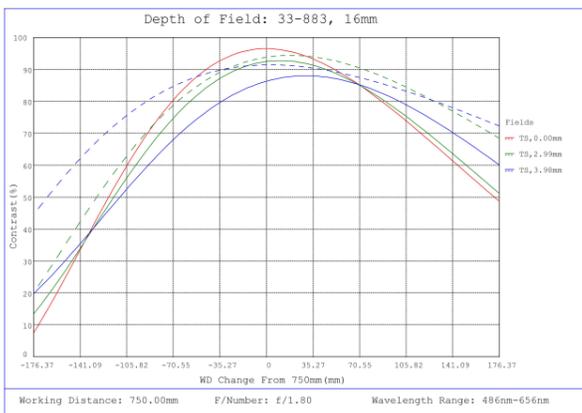
#33-883, 16mm, f/1.8 UCI Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 300mm Working Distance, f1.8



#33-883, 16mm, f/1.8 UCI Series Fixed Focal Length Lens, Depth of Field Plot, 300mm Working Distance, f1.8



#33-883, 16mm, f/1.8 UCI Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 750mm Working Distance, f1.8



#33-883, 16mm, f/1.8 UCI Series Fixed Focal Length Lens, Depth of Field Plot, 750mm Working Distance, f1.8

## Compatible Cameras