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**TECHSPEC® 12mm, f/1.8 UCi Series Fixed Focal Length Lens**



12mm UCi Series Fixed Focal Length Lens



Stock #33-876 **20+ In Stock**

− 1 + €235<sup>00</sup>

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**!** Prices shown are exclusive of VAT/local taxes

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**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):**  
38.00

**Maximum Diameter (mm):**  
22

**Outer Diameter (mm):**  
22

**Weight (g):**  
18

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

## Optical Properties

**Horizontal Field of View @ Max Sensor Format:**  
69.2mm - 34.0°

**Field of View at Max Sensor Format:**  
Horizontal: 69.2mm - 34°  
Vertical: 51.4mm - 25.6°  
Diagonal: 87.6mm - 42.2°

**Horizontal Field of View, 1/1.8" Sensor:**  
69.2mm - 34.0°

**Horizontal Field of View, 1/2" Sensor:**  
61.2mm - 30.3°

**Horizontal Field of View, 1/2.5" Sensor:**  
55.3mm - 27.5°

**Horizontal Field of View, 1/3" Sensor:**  
45.5mm - 22.8°

**Horizontal Field of View, 1/4" Sensor:**  
34.0mm - 17.1°

**Maximum Image Circle (mm):**  
9.00

**Numerical Aperture NA, Object Side:**  
0.0284

**Number of Elements (Groups):**  
7 (6)

**Focal Length FL (mm):**  
12.00

**Working Distance (mm):**  
100 - ∞

**Aperture (f/#):**  
f/1.8

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

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

**Entrance Pupil Position (mm):**  
15.92

**Object Space Principal Plane (mm):**  
23.03

**Image Space Principal Plane (mm):**  
-1.82

**Maximum Distortion (%):**  
-3.03

**Exit Pupil Position (mm):**  
-19.24

**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:**  
M22 x 0.75 (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.

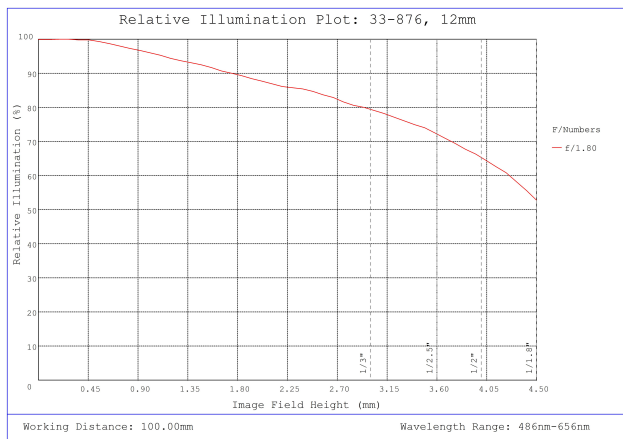
**UCr Series:** All optics glued in place and a locking C-clamp focus ring. [Stabilized Ruggedization](#) for reduced pixel shift and improved focus stability.

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

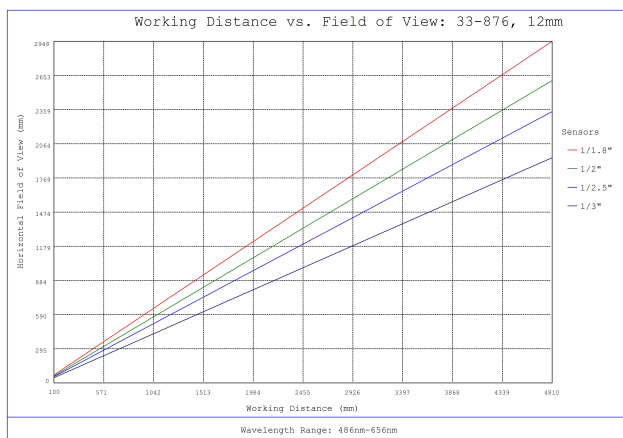
## Technical Information



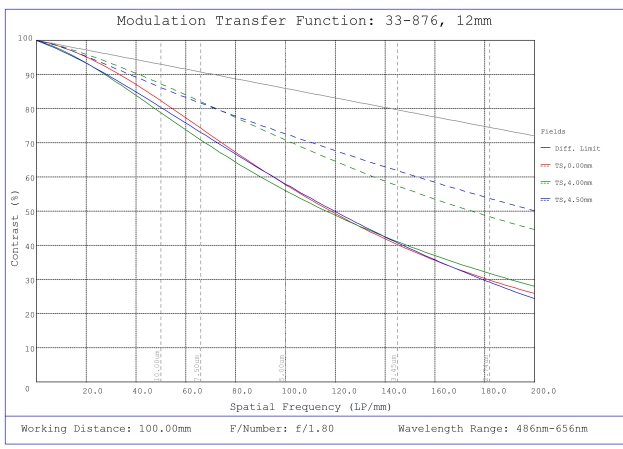
#33-876, 12mm, f/1.8 UCi Series Fixed Focal Length Lens, Distortion Plot



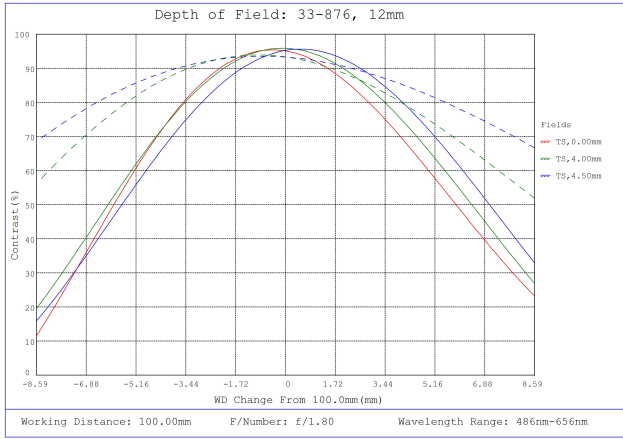
#33-876, 12mm, f/1.8 UCi Series Fixed Focal Length Lens, Relative Illumination Plot



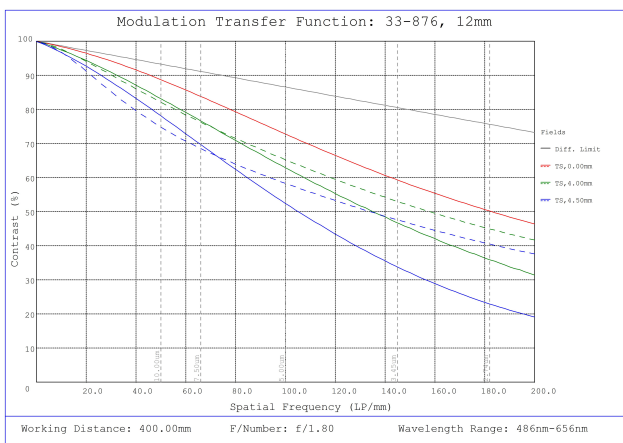
#33-876, 12mm, f/1.8 UCi Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



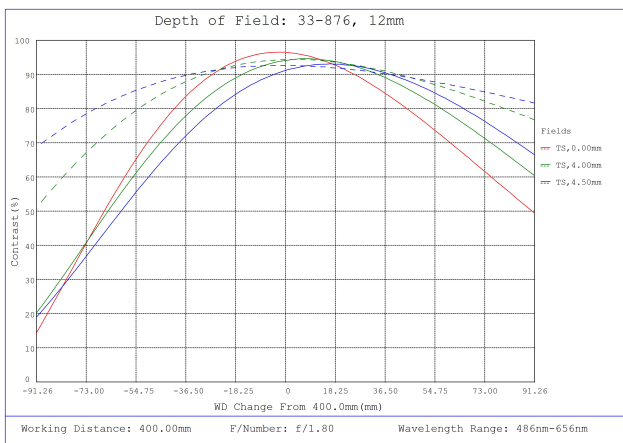
#33-876, 12mm, f/1.8 UCI Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 100mm Working Distance, f1.8



#33-876, 12mm, f/1.8 UCI Series Fixed Focal Length Lens, Depth of Field Plot, 100mm Working Distance, f1.8



#33-876, 12mm, f/1.8 UCI Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 400mm Working Distance, f1.8



#33-876, 12mm, f/1.8 UCI Series Fixed Focal Length Lens, Depth of Field Plot, 400mm Working Distance, f1.8

## Compatible Cameras