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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 ⊕ **\$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:
38.00	Length (mm):
22	Maximum Diameter (mm):
22	Outer Diameter (mm):
18	Weight (g):
0	Maximum Rear Protrusion (mm):

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 MgF₂

Coating Specification:
M4 MgF₂

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)

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:

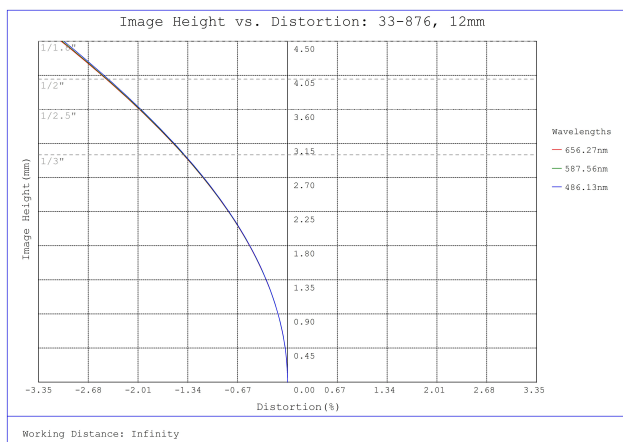
UC Series: Features locking cam focus and iris adjustment in an ultra-compact design and is the most adjustable version of these optical designs; they are the typical high-quality machine vision lenses.

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

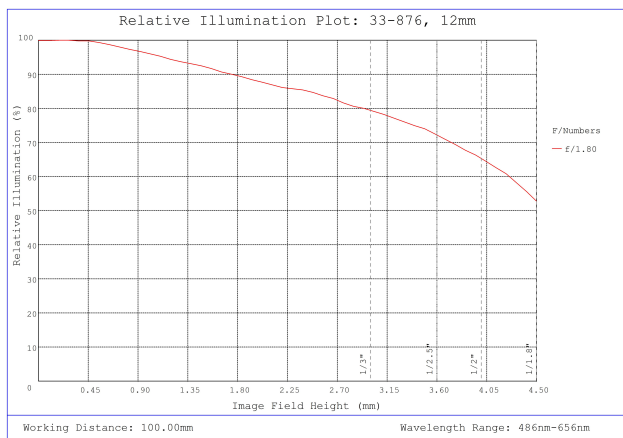
UCr Series: All optics glued in place and a locking C-clamp focus ring. [Stabilized Ruggedization](#) for reduced pixel shift and improved focus stability.

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

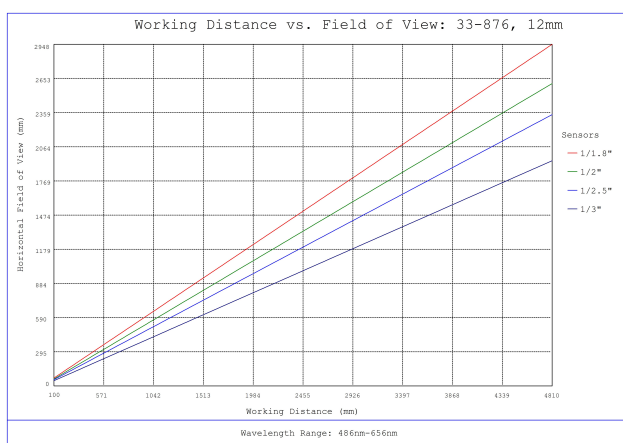
Technical Information



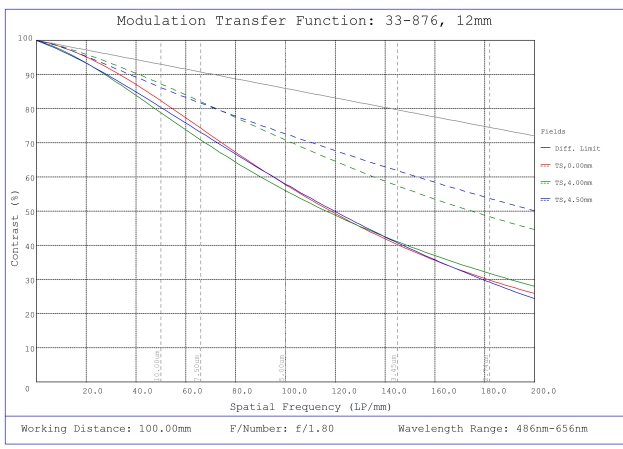
#33-876, 12mm, f/1.8 UCi Series Fixed Focal Length Lens, Distortion Plot



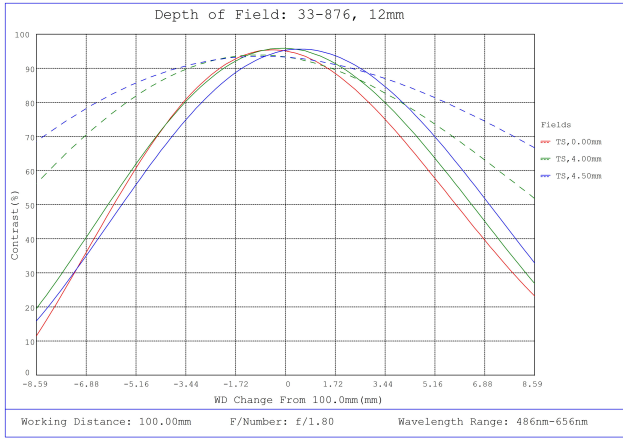
#33-876, 12mm, f/1.8 UCi Series Fixed Focal Length Lens, Relative Illumination Plot



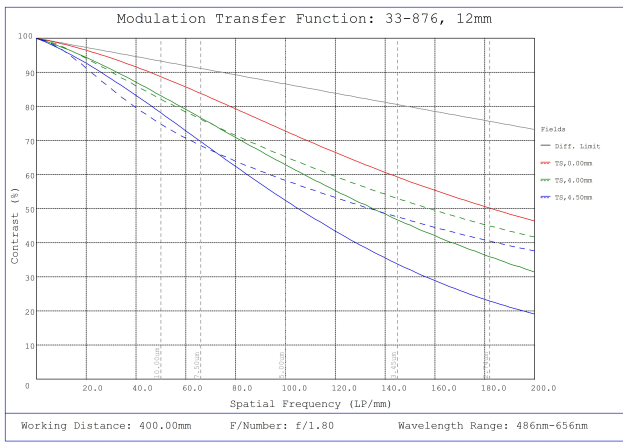
#33-876, 12mm, f/1.8 UCi Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



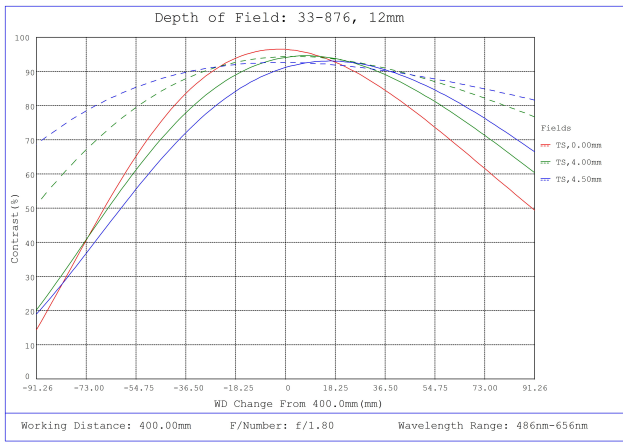
#33-876, 12mm, f/1.8 UCI Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 100mm Working Distance, f1.8



#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