

TECHSPEC[®] 12mm, f/2.8 UCi Series Fixed Focal Length Lens



12mm UCi Series Fixed Focal Length Lens



Stock **#33-877** 5 In Stock

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1

+

S\$309^{.00}

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General	
UCi Series	Series:
Fixed Focal Length Lens	Type:
No	IR Cut Filter:
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: 0.0182
	Number of Elements (Groups): 7 (6)
	Focal Length FL (mm): 12.00
	Working Distance (mm): 100 - ∞
	Aperture (f/#): f/2.8
	Coating: λ/4 MgF ₂
	Coating Specification: λ/4 MgF ₂
	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	
1/2.5"	Optimized Sensor Format:
1/1.8"	Maximum Sensor Format:
1.85	Pixel Size (μm):

Threading & Mounting	
M22 x0.75 (Male)	Filter Thread:
S-Mount (M12 x0.5)	Mount:

Environmental & Durability Factors	
	Storage Temperature (°C):

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 ≤2.2µm 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.

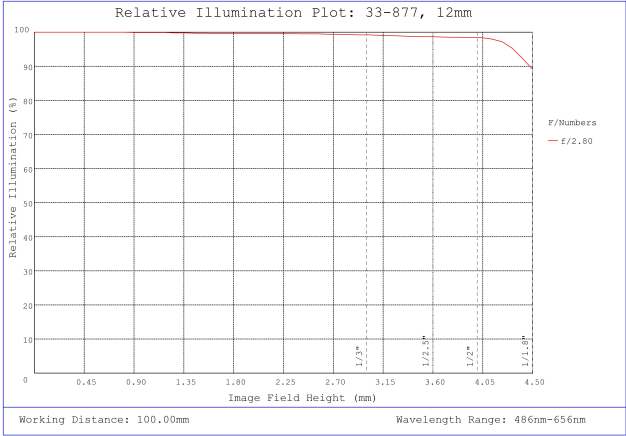
UCr Series: All optics glued in place and a locking C-clamp focus ring. [Stabilized Ruggedization](#) for reduced pixel shift and improved focus stability.

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

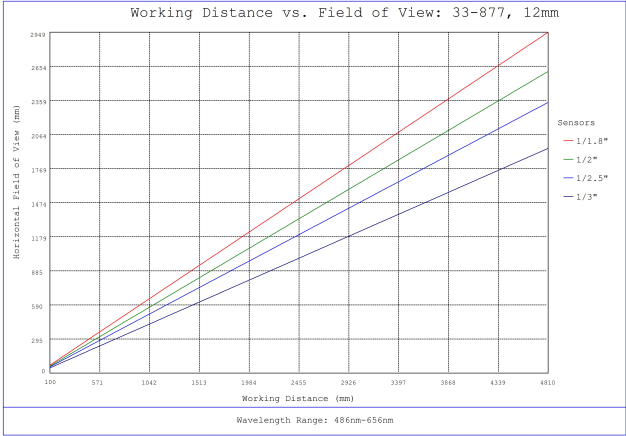
Technical Information



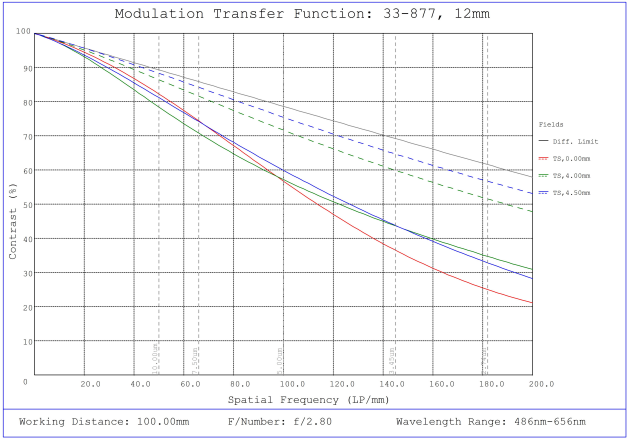
#33-877, 12mm, f/2.8 UCi Series Fixed Focal Length Lens, Distortion Plot



#33-877, 12mm, f/2.8 UCi Series Fixed Focal Length Lens, Relative Illumination Plot



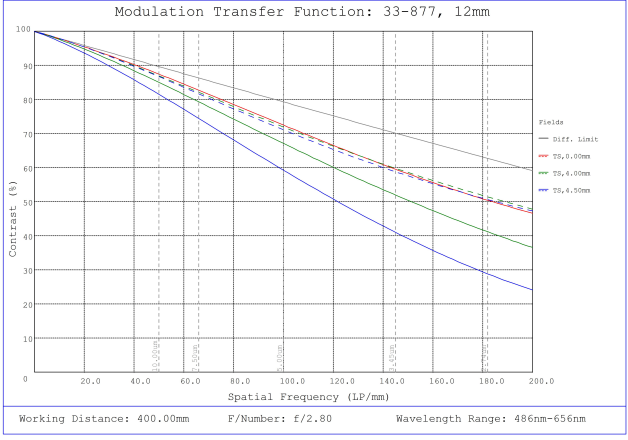
#33-877, 12mm, f/2.8 UCi Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



#33-877, 12mm, f/2.8 UCi Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 100mm Working Distance, f2.8



#33-877, 12mm, f/2.8 UCi Series Fixed Focal Length Lens, Depth of Field Plot, 100mm Working Distance, f2.8



#33-877, 12mm, f/2.8 UCi Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 400mm Working Distance, f2.8



#33-877, 12mm, f/2.8 UCi Series Fixed Focal Length Lens, Depth of Field Plot, 400mm Working Distance, f2.8

Compatible Cameras