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TECHSPEC®

12mm, f/2.8 UCi Series Fixed Focal Length Lens



12mm UCi Series Fixed Focal Length Lens



Stock **#33-877** **9 In Stock**

-

1

+

C\$378<sup>00</sup>

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| Volume Pricing |                               |
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| Qty 1+         | C\$378.00 each                |
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Product Downloads

| 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:<br>69.2mm - 34.0°                                                         |
|                    | Field of View at Max Sensor Format:<br>Horizontal: 69.2mm - 34°<br>Vertical: 51.4mm - 25.6°<br>Diagonal: 87.6mm - 42.2° |
|                    | Horizontal Field of View, 1/1.8" Sensor:<br>69.2mm - 34.0°                                                              |
|                    | Horizontal Field of View, 1/2" Sensor:<br>61.2mm - 30.3°                                                                |
|                    | Horizontal Field of View, 1/2.5" Sensor:<br>55.3mm - 27.5°                                                              |
|                    | Horizontal Field of View, 1/3" Sensor:<br>45.5mm - 22.8°                                                                |
|                    | Horizontal Field of View, 1/4" Sensor:<br>34.0mm - 17.1°                                                                |
|                    | Maximum Image Circle (mm):<br>9.00                                                                                      |
|                    | Numerical Aperture NA, Object Side:<br>0.0182                                                                           |
|                    | Number of Elements (Groups):<br>7 (6)                                                                                   |
|                    | Focal Length FL (mm):<br>12.00                                                                                          |
|                    | Working Distance (mm):<br>100 - ∞                                                                                       |
|                    | Aperture (f/#):<br>f/2.8                                                                                                |
|                    | Coating:<br>λ/4 MgF <sub>2</sub>                                                                                        |
|                    | Coating Specification:<br>λ/4 MgF <sub>2</sub>                                                                          |
|                    | Entrance Pupil Position (mm):<br>15.92                                                                                  |
|                    | Object Space Principal Plane (mm):<br>23.03                                                                             |
|                    | Image Space Principal Plane (mm):<br>-1.82                                                                              |
|                    | Maximum Distortion (%):<br>-3.03                                                                                        |
|                    | Exit Pupil Position (mm):<br>-19.24                                                                                     |
|                    | Lens Wavelength Range:<br>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.

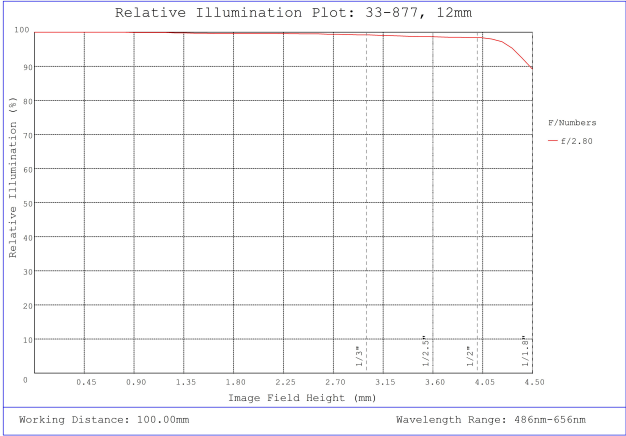
**UCr Series:** All optics glued in place and a locking C-clamp focus ring. [Stabilized Ruggedization](#) for reduced pixel shift and improved focus stability.

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

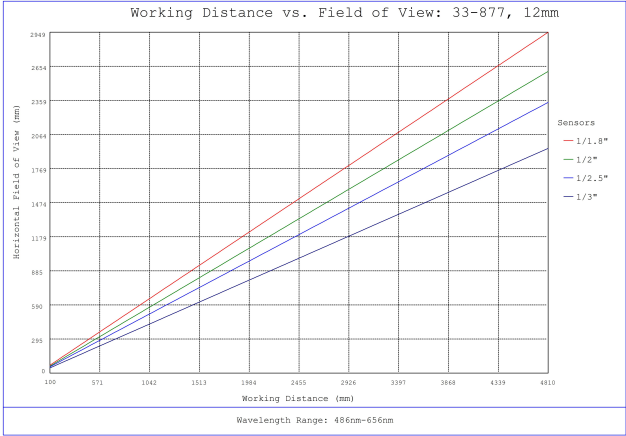
Technical Information



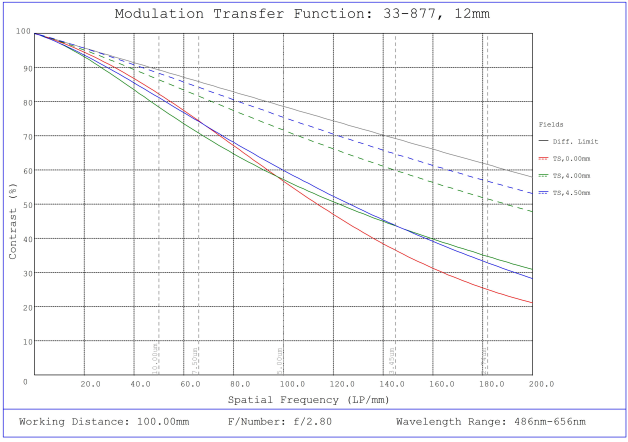
#33-877, 12mm, f/2.8 UCi Series Fixed Focal Length Lens, Distortion Plot



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



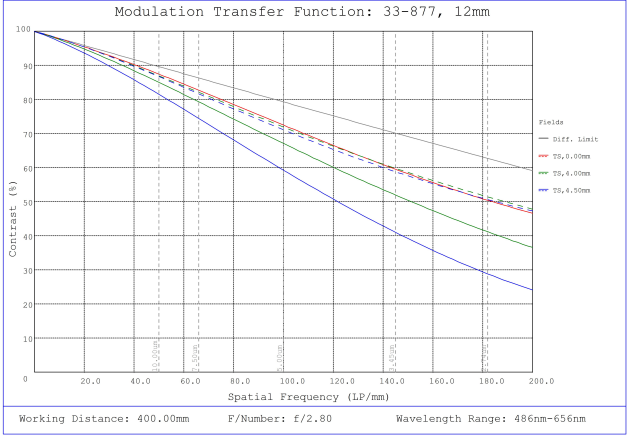
#33-877, 12mm, f/2.8 UCi Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



#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