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**TECHSPEC® 4mm f/1.8 Sealed UCw Series Fixed Focal Length Lens**



UCw Series Fixed Focal Length Lenses

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⊖ 1 ⊕ **A\$451<sup>20</sup>**

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**General**

UCw Series **Product Family:**

Fixed Focal Length Lens **Type:**

High Performance Lens with Compact Form Factor **Imaging Lens Type:**

**Physical & Mechanical Properties**

Fixed **Iris Option:**

40.71 **Length (mm):**

40 **Maximum Diameter (mm):**

40 **Outer Diameter (mm):**

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

40.6 **Maximum Length (mm):**

## Optical Properties

84.8° **Horizontal Field of View @ Max Sensor Format:**

84.8° **Horizontal Field of View, 1/2" Sensor:**

77.8° **Horizontal Field of View, 1/2.5" Sensor:**

65.4° **Horizontal Field of View, 1/3" Sensor:**

9.7° **Horizontal Field of View, 1/4" Sensor:**

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

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

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

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

0 - ∞ **Working Distance (mm):**

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

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

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

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

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

5.84 **Image Space Principal Plane (mm):**

-20.43 **Maximum Distortion (%):**

-12.68 **Exit Pupil Position (mm):**

VIS **Lens Wavelength Range:**

## Sensor

1/2.5" **Optimized Sensor Format:**

1/2" **Maximum Sensor Format:**

1.85 **Pixel Size (µm):**

## Threading & Mounting

M62 x 0.75 (Male) **Filter Thread:**

[#33-308 \(Required\)](#) **Filter Thread Adapter:**

M40 x 0.5 (Male) **Front Thread:**

C-Mount **Mount:**

## Environmental & Durability Factors

IPX7 **Environmental Rating:**

-20 to +60 For questions regarding operating temperature please contact our support team **Storage Temperature (°C):**

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Waterproof (IPX7) **Type of Ruggedization:**

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## Regulatory Compliance

[View](#) **Certificate of Conformance:**

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## Product Details

- Up to 1/2", C-Mount Lens
- Ultra-Compact (UC), High Resolution Lens for Small Sensors
- Waterproof Versions of UC Series Fixed Focal Length Lenses
- Meets IEC Ingress Protection Ratings of IPX7

TECHSPEC® UCw Series Fixed Focal Length Lenses are waterproof versions of our [TECHSPEC® UC Series Fixed Focal Length Lenses](#), and are designed to meet IEC Ingress Protection Codes IPX7 to withstand exposure to water up to 1 meter depth for 30 minutes. Additionally, their compact size provides high performance at an affordable cost without sacrificing quality or feel. These lenses include a hydrophobic coated window to prevent water droplets from settling on the lens' surface and are sealed with multiple O-rings to prevent moisture from entering the housing. TECHSPEC® UCw Series Fixed Focal Length Lenses are ideal for applications in space constrained, harsh environments such as food inspection, security, medical, and factory automation.

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.

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