

**TECHSPEC® 4.5mm f/8.0 Sealed Cw Series Fixed Focal Length Lens**

4.5mm Focal Length

Stock #15-617 **20+ In Stock** 1  £393<sup>00</sup>**ADD TO CART**

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| Qty 1+         | £393.00 each                  |
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① Prices shown are exclusive of VAT/local taxes

Product Downloads

**SPECIFICATIONS****General**

Series:

Cw Series

**Note:**  
C-Mount compatible with O-ring 25mm ID x 2mm

**Type:**  
Fixed Focal Length Lens

## Physical & Mechanical Properties

**Iris Option:**  
Fixed

**Length (mm):**  
40.82

**Maximum Diameter (mm):**  
54.00

**Outer Diameter (mm):**  
54

**Maximum Rear Protrusion (mm):**  
3.3

## Optical Properties

**Field of View at Max Sensor Format:**  
Horizontal: 84.7°  
Vertical: 66.1°  
Diagonal: 100.0°

**Horizontal Field of View, 1/1.8" Sensor:**  
84.7°

**Horizontal Field of View, 1/2" Sensor:**  
76.8°

**Horizontal Field of View, 1/2.5" Sensor:**  
70.1°

**Horizontal Field of View, 1/3" Sensor:**  
59.34°

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

**Numerical Aperture NA, Object Side:**  
0.0070

**Number of Elements (Groups):**  
9 (8)

**Focal Length FL (mm):**  
4.50

**Working Distance (mm):**  
75 - ∞

**Aperture (f/##):**  
f/8

**Coating Specification:**  
425 - 675nm BBAR

**Entrance Pupil Position (mm):**  
27.308

**Object Space Principal Plane (mm):**  
-31.12

**Image Space Principal Plane (mm):**  
35.70

**Maximum Distortion (%):**  
15.959

**Exit Pupil Position (mm):**  
-9.272

**Lens Wavelength Range:**  
VIS

## Sensor

**Maximum Sensor Format:**  
1/1.8"

**Pixel Size (μm):**  
2.74

## Threading & Mounting

**Filter Thread:**  
M49 x 0.75 (Female)

**Mount:**  
C-Mount

## Environmental & Durability Factors

**Environmental Rating:**  
IPX7

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

## Regulatory Compliance

### Certificate of Conformance:

[View](#)

## PRODUCT DETAILS

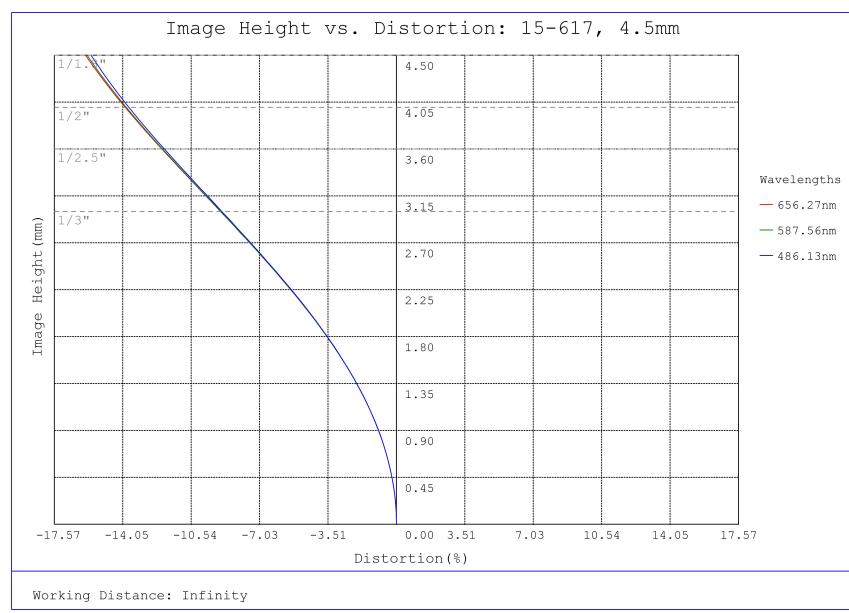
- Up to 2/3", C-Mount Lens
- Waterproof (Cw) Versions of C Series Fixed Focal Length Lenses
- Meets IEC Ingress Protection Ratings of IPX7 and IPX9K
- Designed to Eliminate the Need for a Protective Lens Cover

TECHSPEC® Cw Series Fixed Focal Length Lenses are waterproof versions of our **TECHSPEC® C Series Fixed Focal Length Lenses**. Designed to meet IEC Ingress Protection Codes IPX7 and IPX9K, these lenses withstand exposure to water up to 1 meter depth for 30 minutes and operate in close-range high pressure, high temperature water spray downs with the exception of all 3.5 and 4.5mm options which are IPX7. These lenses include a hydrophobic coated window to prevent water droplets from settling on the lens' surface. To prevent moisture from entering the housing, the lenses are sealed with multiple O-rings. TECHSPEC® Cw Series Fixed Focal Length Lenses are designed for up to 7.5 MegaPixel, 2/3" sensors and are ideal for applications including food, pharma, automotive, and security. These lenses won the Bronze-Level 2021 Vision Systems Design Innovators Award.

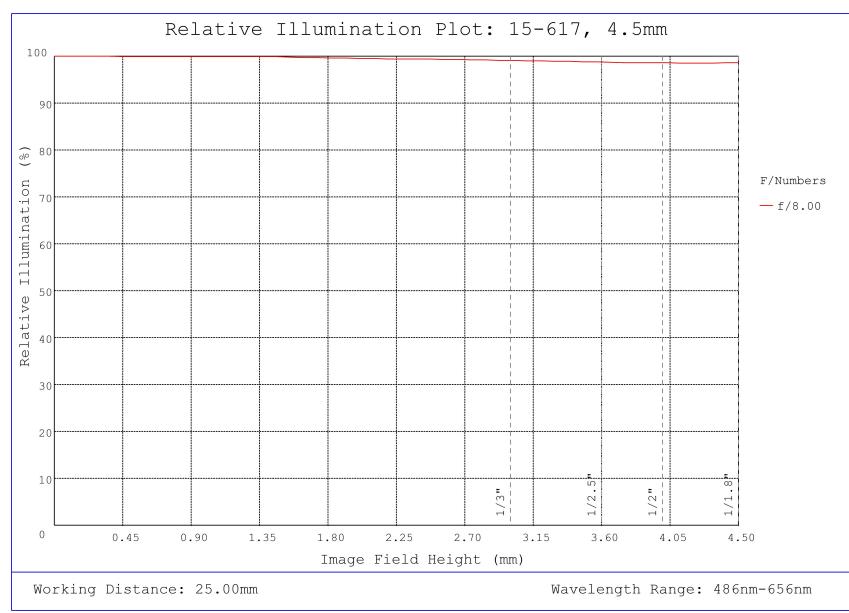
Edmund Optics has created a family of high performance optical designs (the C Series family) and developed 6 customized optomechanical solutions targeted for specific applications. These lens sub-families utilize the same optics as the C Series lenses providing the same optical performance in a variety of optomechanical solutions to meet your application requirements:

- **C Series:** Features locking cam focus and iris adjustment and is the most adjustable version of these optical designs; they are the typical high quality machine vision lenses. Also available with a [VIS-NIR Broadband Anti-Reflection \(BBAR\) Coating](#).
- **Ci Series:** Simplified mechanics featuring fixed apertures with compact housing. [Industrial Ruggedization](#) for reduced size, cost, and locked focus.
- **Cr Series:** All optics glued in place and a locking C-clamp focus ring. [Stabilized Ruggedization](#) for reduced pixel shift and improved focus stability.
- **Cx Series:** Modular, flexible mechanics allows lenses to be taken apart for easy integration of accessories such as liquid lenses, apertures, and more.
- **Liquid Lens Cx Series:** Designed with an integrated liquid lens for quick autofocus.
- Cw Series: Waterproof, designed to meet IEC [Ingress Protection](#) Code IPX7 and IPX9K.

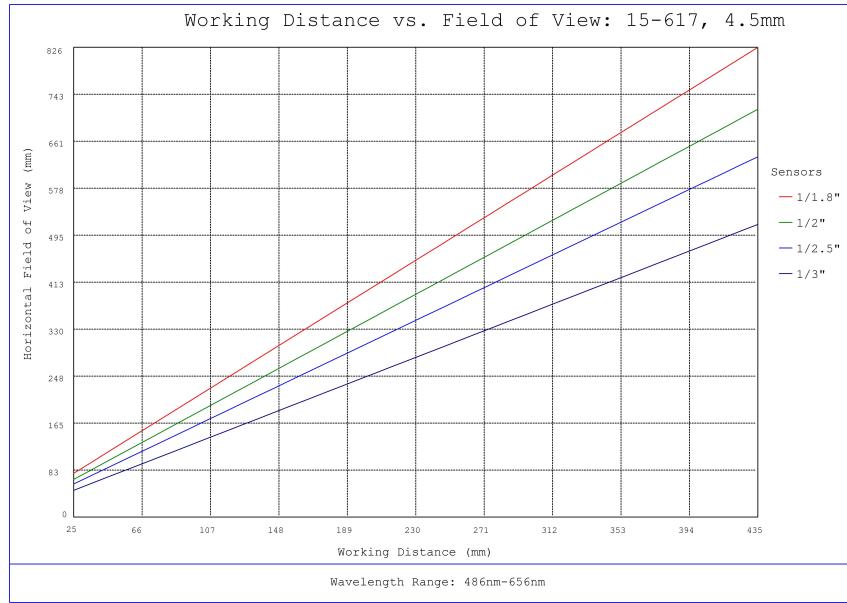
## TECHNICAL INFORMATION



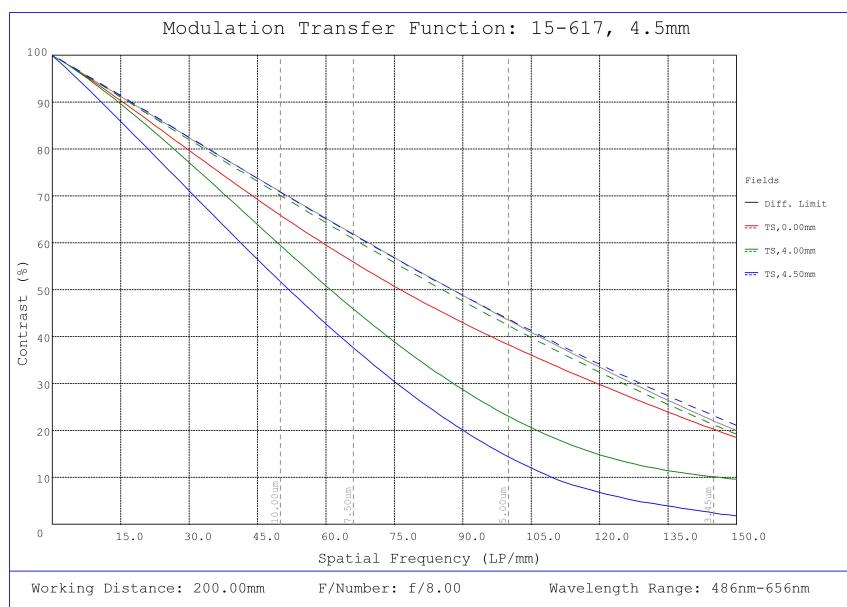
#15-617, 4.5mm f/8.0 Sealed Cw Series Fixed Focal Length Lens, Distortion Plot



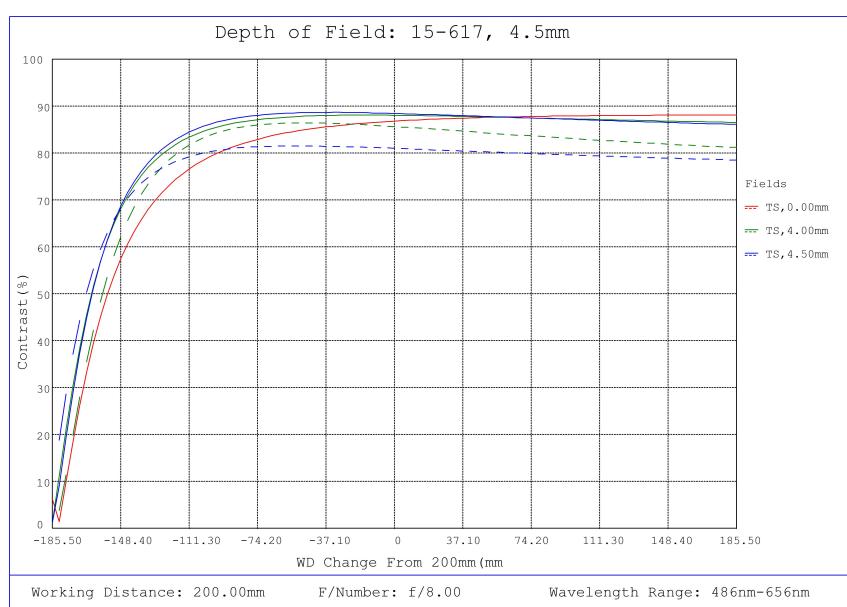
#15-617, 4.5mm f/8.0 Sealed Cw Series Fixed Focal Length Lens, Relative Illumination Plot



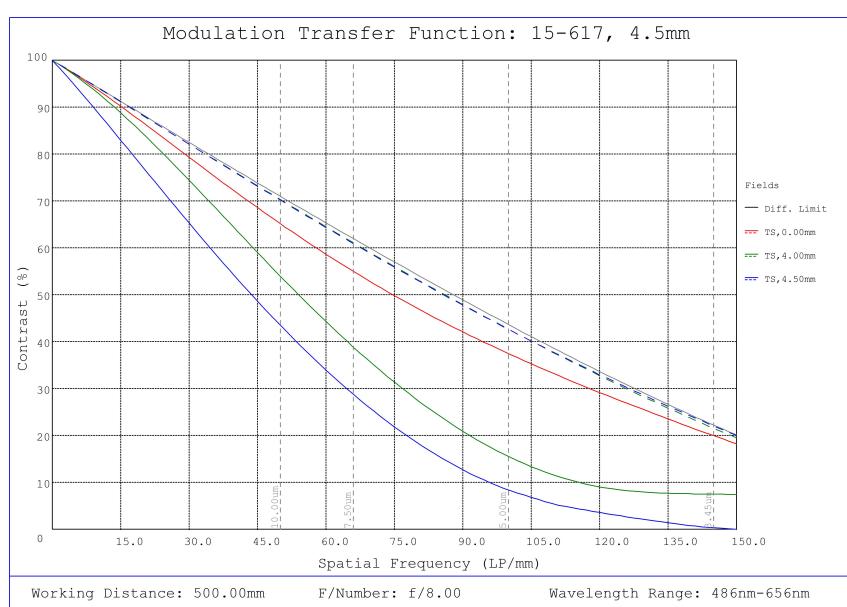
#15-617, 4.5mm f/8.0 Sealed Cw Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



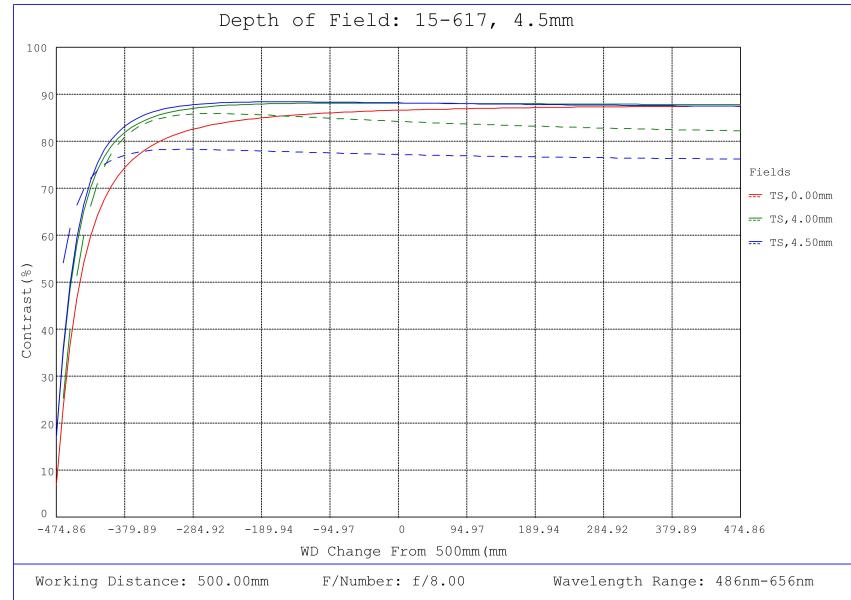
#15-617, 4.5mm f/8.0 Sealed Cw Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 200mm Working Distance, f8



#15-617, 4.5mm f/8.0 Sealed Cw Series Fixed Focal Length Lens, Depth of Field Plot, 200mm Working Distance, f8



#15-617, 4.5mm f/8.0 Sealed Cw Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 500mm Working Distance, f8



#15-617, 4.5mm f/8.0 Sealed Cw Series Fixed Focal Length Lens, Depth of Field Plot, 500mm Working Distance, f8