

**TECHSPEC® 4.5mm f/2.0 Sealed Cw Series Fixed Focal Length Lens**



4.5mm Focal Length



Stock #15-613 [CONTACT US](#)

1 **£393<sup>00</sup>**

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

Product Downloads

**General**

Cw Series **Product Family:**

C-Mount compatible with O-ring 25mm ID x2mm **Note:**

Fixed Focal Length Lens **Type:**

## Physical & Mechanical Properties

Fixed	Iris Option:
40.82	Length (mm):
54.00	Maximum Diameter (mm):
54	Outer Diameter (mm):
3.3	Maximum Rear Protrusion (mm):

## Optical Properties

Field of View at Max Sensor Format: Horizontal: 84.7° Vertical: 66.1° Diagonal: 100.0°	
84.7°	Horizontal Field of View, 1/1.8" Sensor:
76.8°	Horizontal Field of View, 1/2" Sensor:
70.1°	Horizontal Field of View, 1/2.5" Sensor:
59.34°	Horizontal Field of View, 1/3" Sensor:
9.00	Maximum Image Circle (mm):
0.0270	Numerical Aperture NA, Object Side:
9 (8)	Number of Elements (Groups):
4.50	Focal Length FL (mm):
75 - ∞	Working Distance (mm):
f/2	Aperture (f/#):
425 - 675nm BBAR	Coating Specification:
27.308	Entrance Pupil Position (mm):
-31.12	Object Space Principal Plane (mm):
35.70	Image Space Principal Plane (mm):
15.959	Maximum Distortion (%):
-9.272	Exit Pupil Position (mm):
VIS	Lens Wavelength Range:

## Sensor

1/1.8"	Maximum Sensor Format:
2.74	Pixel Size (μm):

## Threading & Mounting

M49 x 0.75 (Female)	Filter Thread:
C-Mount	Mount:

## Environmental & Durability Factors

IPX7	Environmental Rating:
Waterproof (IPX7)	Type of Ruggedization:

## Regulatory Compliance

<a href="#">View</a>	Certificate of Conformance:
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# Product Details

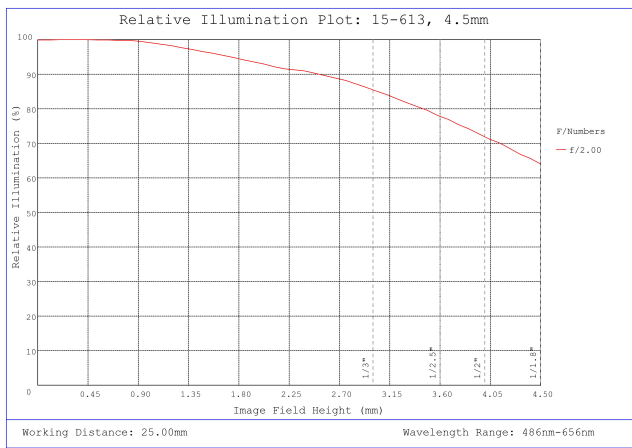
- Up to 2/3", C-Mount Lens
- Waterproof (Cw) Versions of C Series Fixed Focal Length Lenses
- Meets IEC Ingress Protection Ratings of IPX7 and IPX9K
- Designed to Eliminate the Need for a Protective Lens Cover

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.

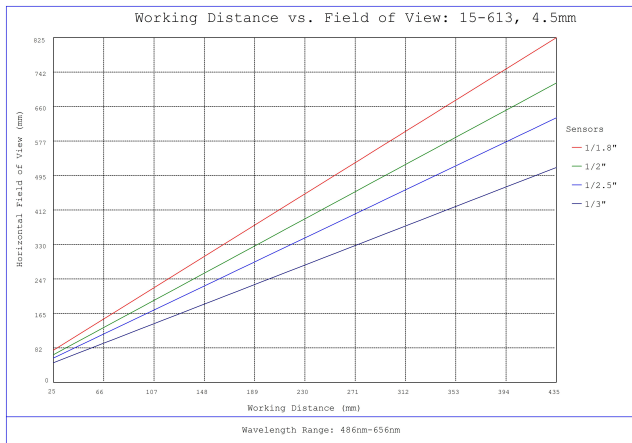
Edmund Optics has created a family of high performance optical designs (the C Series family) and developed 6 customized optomechanical solutions targeted for specific applications. These lens sub-families utilize the same optics as the C Series lenses providing the same optical performance in a variety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

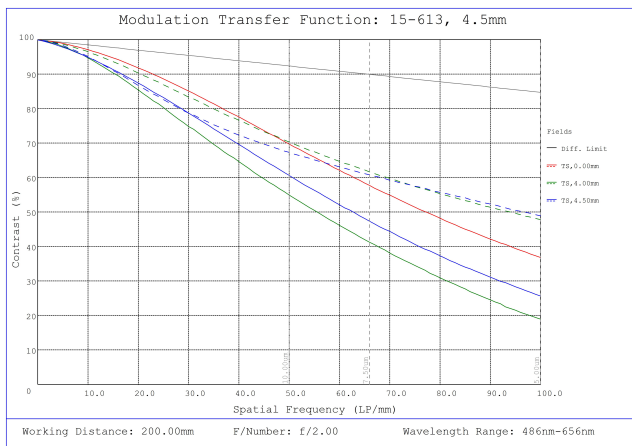
# Technical Information



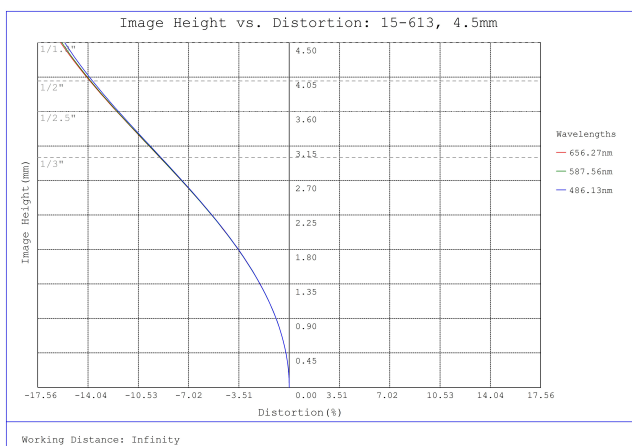
#15-613, 4.5mm f/2.0 Sealed Cw Series Fixed Focal Length Lens, Relative Illumination Plot



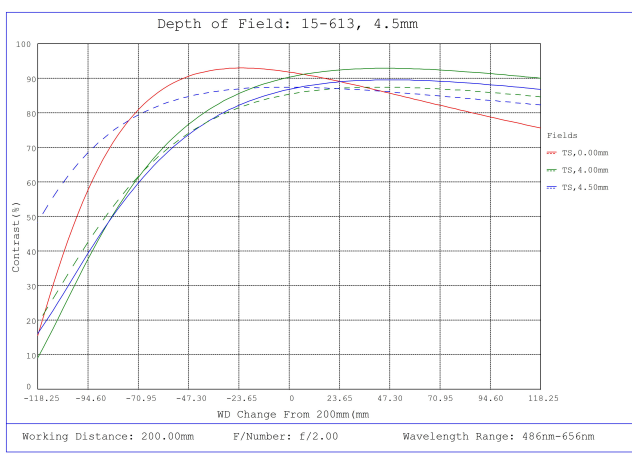
#15-613, 4.5mm f/2.0 Sealed Cw Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



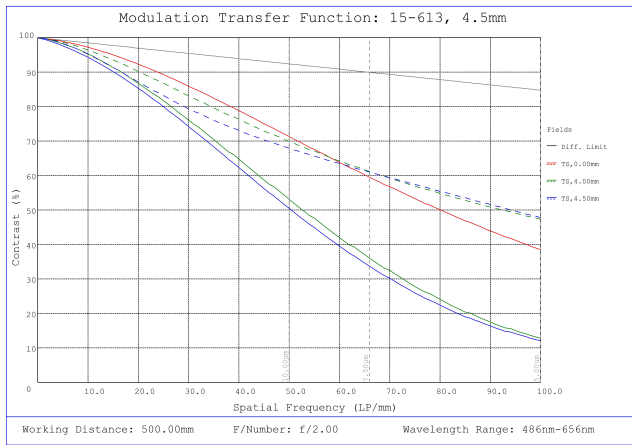
#15-613, 4.5mm f/2.0 Sealed Cw Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 200mm Working Distance, f2



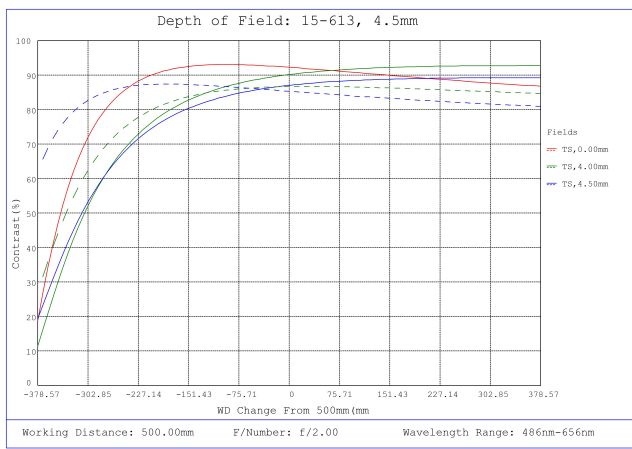
#15-613, 4.5mm f/2.0 Sealed Cw Series Fixed Focal Length Lens, Distortion Plot



#15-613, 4.5mm f/2.0 Sealed Cw Series Fixed Focal Length Lens, Depth of Field Plot, 200mm Working Distance, f2



#15-613, 4.5mm f/2.0 Sealed Cw Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 500mm Working Distance, f2



#15-613, 4.5mm f/2.0 Sealed Cw Series Fixed Focal Length Lens, Depth of Field Plot, 500mm Working Distance, f2