

**TECHSPEC® 50mm, f/2.0 Sealed Cw Series Fixed Focal Length Lens**



50mm Focal Length



Stock #15-662 **12 In Stock**

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**SPECIFICATIONS**

**General**

Cw Series

Series:

Note:

C-Mbunt compatible with O-ring 25mm ID x2mm

Fixed Focal Length Lens **Type:**

## Physical & Mechanical Properties

Fixed **Iris Option:**

51.80 **Length (mm):**

41.00 **Maximum Diameter (mm):**

41 **Outer Diameter (mm):**

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

## Optical Properties

**Field of View at Max Sensor Format:**  
Horizontal: 10.0°  
Vertical: 7.54°  
Diagonal: 12.5°

10.0° **Horizontal Field of View, 2/3" Sensor:**

8.22° **Horizontal Field of View, 1/1.8" Sensor:**

7.31° **Horizontal Field of View, 1/2" Sensor:**

6.58° **Horizontal Field of View, 1/2.5" Sensor:**

5.49° **Horizontal Field of View, 1/3" Sensor:**

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

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

6 (5) **Number of Elements (Groups):**

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

100 - ∞ **Working Distance (mm):**

f/2.0 **Aperture (f/#):**

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

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

-11.85 **Object Space Principal Plane (mm):**

-38.15 **Image Space Principal Plane (mm):**

0.257 **Maximum Distortion (%):**

-40.88 **Exit Pupil Position (mm):**

VS **Lens Wavelength Range:**

## Sensor

2/3" **Maximum Sensor Format:**

2.74 **Pixel Size (µm):**

## Threading & Mounting

M36 x 0.50 (Female) **Filter Thread:**

C-Mbunt **Mount:**

## Environmental & Durability Factors

IPX7 and IPX9K **Environmental Rating:**

-20 to +60 **Storage Temperature (°C):**

## Regulatory Compliance

[View](#)

Certificate of Conformance:

## PRODUCT DETAILS

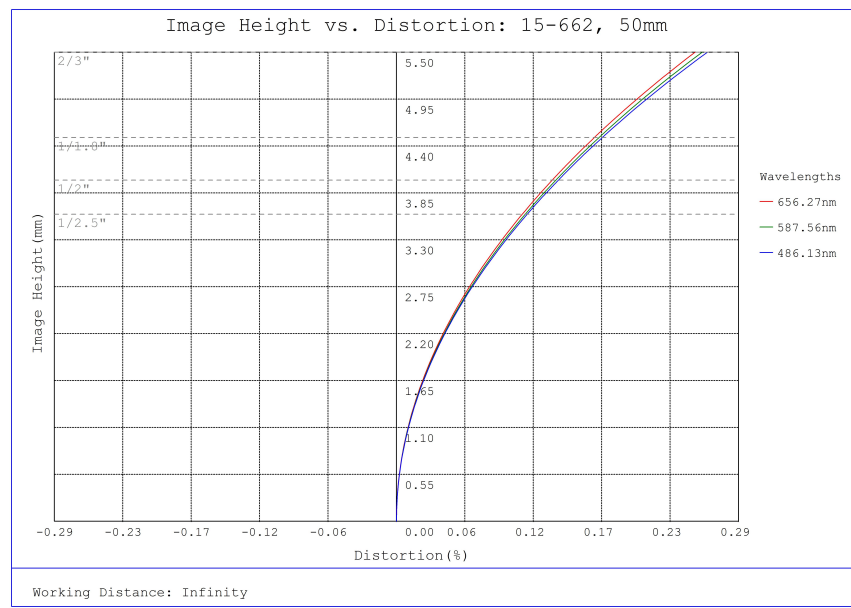
- Up to 2/3", C-Mount Lens
- Waterproof (Cw) Versions of C Series Fixed Focal Length Lenses
- Meets IEC Ingress Protection Ratings of IPX7 and IPX9K
- Designed to Eliminate the Need for a Protective Lens Cover

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 spraydowns 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.

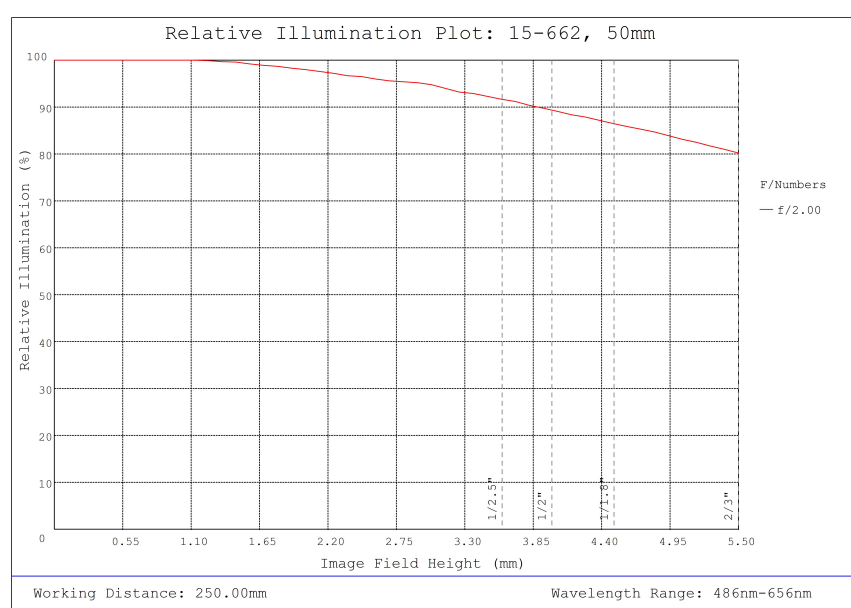
Edmund Optics has created a family of high performance optical designs (the C Series family) and developed 6 customized optomechanical solutions targeted for specific applications. These lens sub-families utilize the same optics as the C Series lenses providing the same optical performance in a variety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

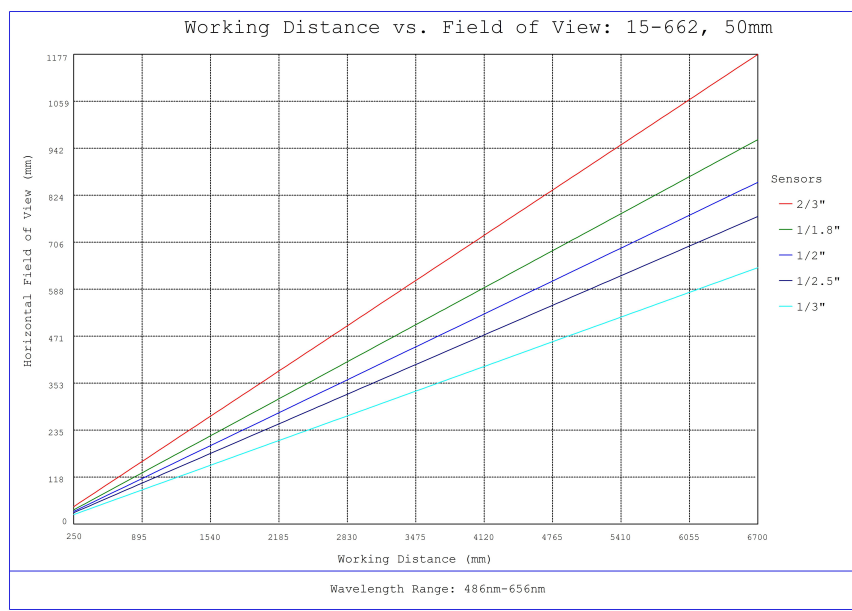
## TECHNICAL INFORMATION



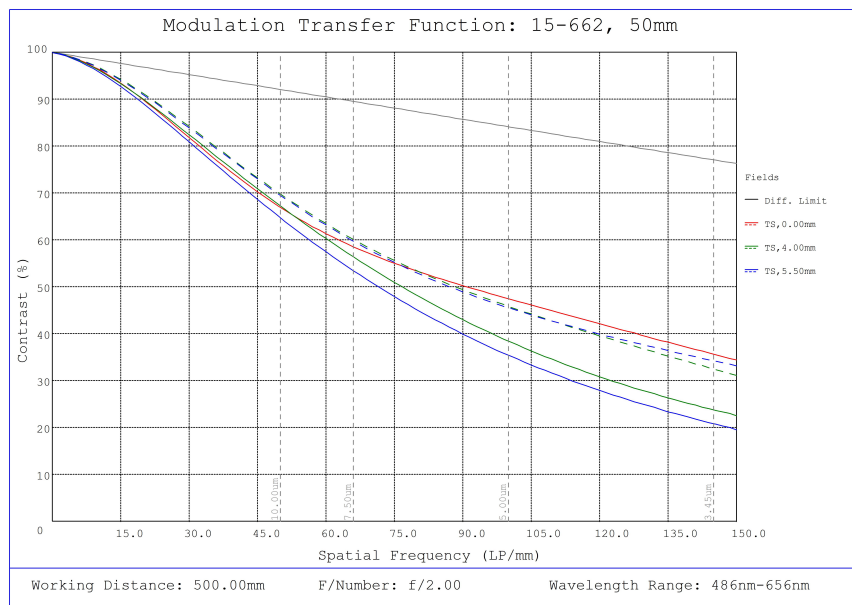
#15-662, 50mm, f/2.0 Sealed Cw Series Fixed Focal Length Lens, Distortion Plot



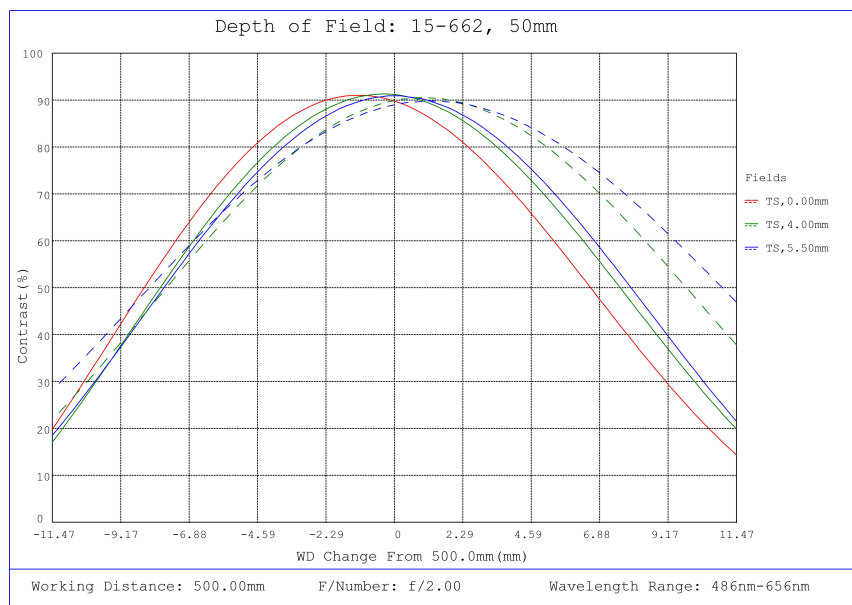
#15-662, 50mm, f/2.0 Sealed Cw Series Fixed Focal Length Lens, Relative Illumination Plot



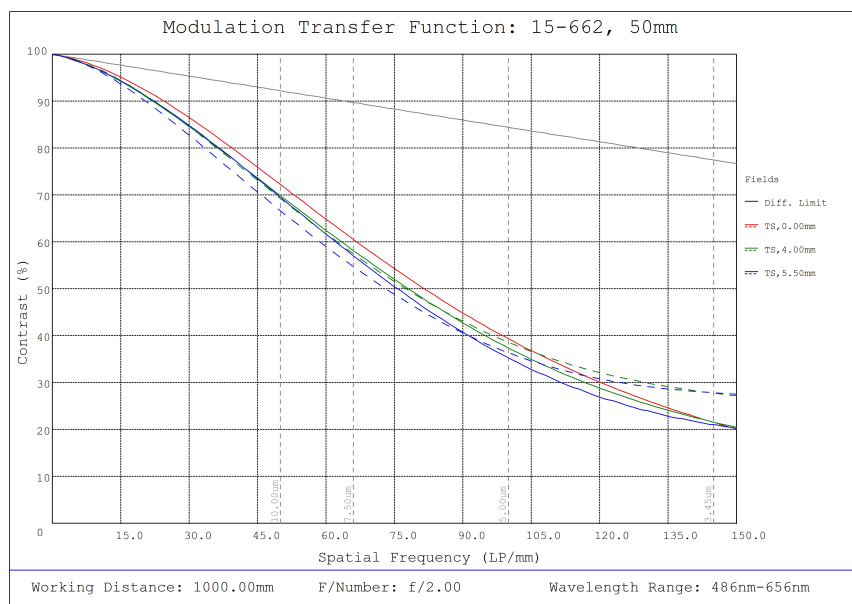
#15-662, 50mm, f/2.0 Sealed Cw Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



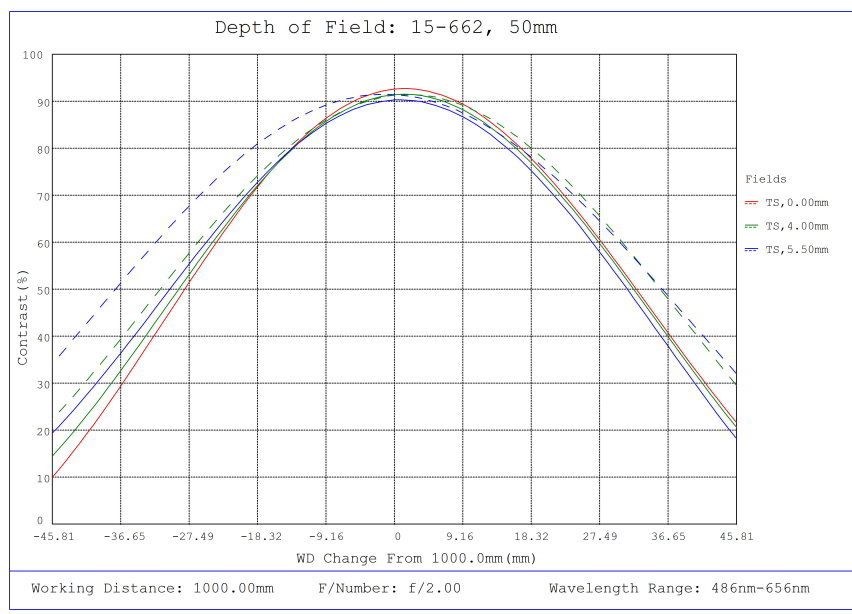
#15-662, 50mm, f/2.0 Sealed Cw Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 500mm Working Distance, f2



#15-662, 50mm, f/2.0 Sealed Cw Series Fixed Focal Length Lens, Depth of Field Plot, 500mm Working Distance, f2



#15-662, 50mm, f/2.0 Sealed Cw Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 1000mm Working Distance, f2



#15-662, 50mm, f/2.0 Sealed Cw Series Fixed Focal Length Lens, Depth of Field Plot, 1000mm Working Distance, f2