

TECHSPEC®

50mm, f/11 Sealed Cw Series Fixed Focal Length Lens



50mm Focal Length



Stock **#15-667** [CONTACT US](#)

-

1

+

€418^{.00}

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Volume Pricing	
Qty 1+	€418,00 each
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SPECIFICATIONS

General

Cw Series

Series:

C-Mbunt compatible with O-ring 25mm ID x2mm		Note:
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):
0.008		Numerical Aperture NA, Object Side:
6 (5)		Number of Elements (Groups):
50.00		Focal Length FL (mm):
100 - ∞		Working Distance (mm):
f/11		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):
VIS		Lens Wavelength Range:
Sensor		
2/3"		Maximum Sensor Format:
2.74		Pixel Size (μm):
Threading & Mounting		
M36 x0.50 (Female)		Filter Thread:
C-Mbunt		Mount:
Environmental & Durability Factors		
IPX7 and IPX9K		Environmental Rating:
		Storage Temperature (°C):

View

- 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

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.

Image Height vs. Distortion: 15-667, 50mm

Wavelengths

- 656.27nm
- 587.56nm
- 486.13nm

Image Height (mm)

Distortion(%)

Working Distance: Infinity

The graph shows the relationship between image height and distortion for a 15-667, 50mm lens at infinity working distance. The y-axis represents Image Height in mm, ranging from 0.55 to 5.50. The x-axis represents Distortion in percent, ranging from -0.29 to 0.29. Three curves are plotted for different wavelengths: 656.27nm (red), 587.56nm (green), and 486.13nm (blue). The curves show that distortion increases with image height and is slightly higher for shorter wavelengths (blue) compared to longer wavelengths (red). The curves are nearly identical for heights above 2.20 mm.

Relative Illumination Plot: 15-667, 50mm

Y-axis: Relative illumination (%)

X-axis: Image Field Height (mm)

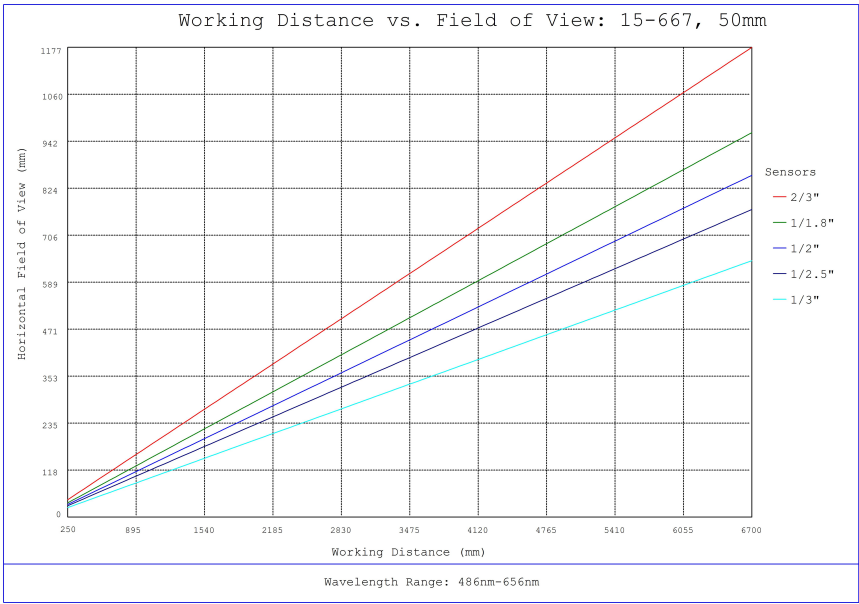
Legend: F/Numbers, $f/11.0$

Field Height Labels: $1/2.5''$, $1/2''$, $1/1.5''$, $2/3''$

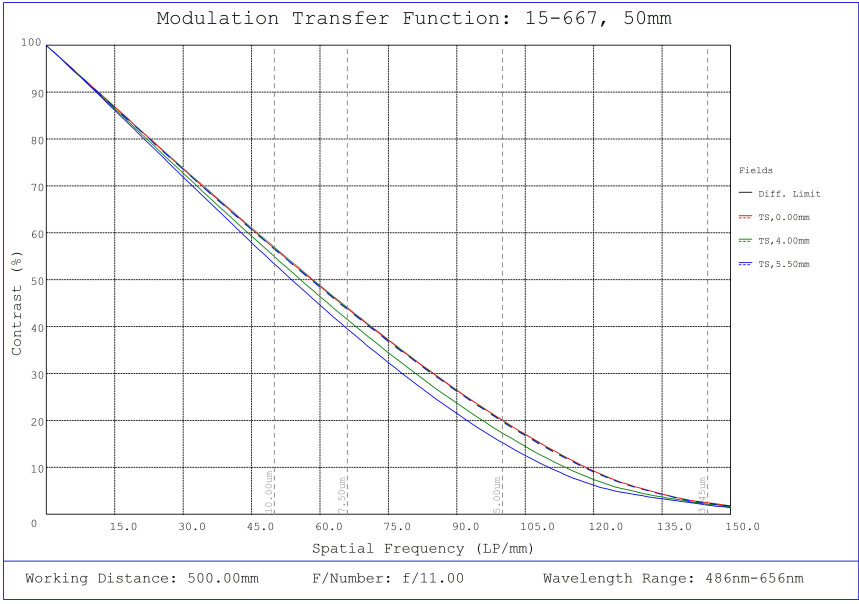
Working Distance: 250.00mm

Wavelength Range: 486nm-656nm

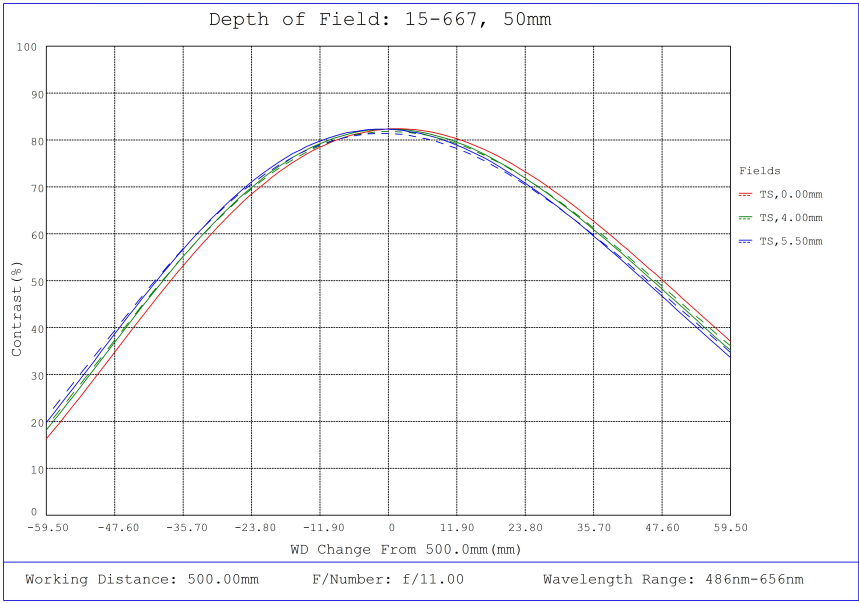
#15-667, 50mm, f/11 Sealed Cw Series Fixed Focal Length Lens, Relative Illumination Plot



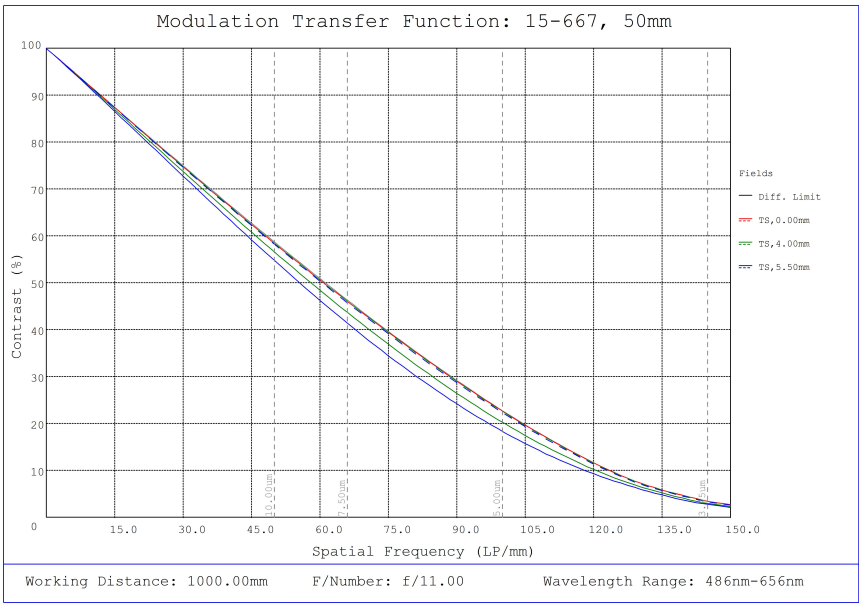
#15-667, 50mm, f/11 Sealed Cw Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



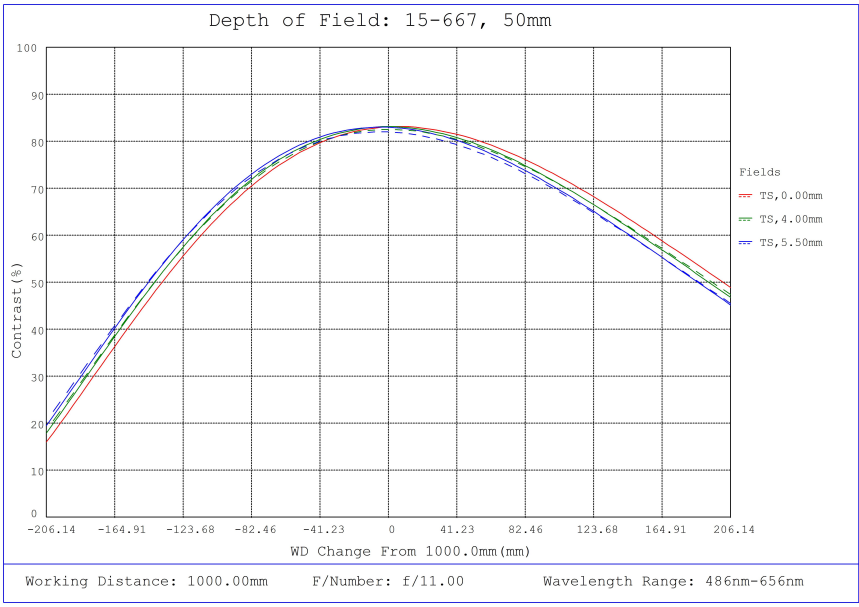
#15-667, 50mm, f/11 Sealed Cw Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 500mm Working Distance, f11



#15-667, 50mm, f/11 Sealed Cw Series Fixed Focal Length Lens, Depth of Field Plot, 500mm Working Distance, f11



#15-667, 50mm, f/11 Sealed Cw Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 1000mm Working Distance, f11



#15-667, 50mm, f/11 Sealed Cw Series Fixed Focal Length Lens, Depth of Field Plot, 1000mm Working Distance, f11