

TECHSPEC®

12mm, f/16 Cw Series Fixed Focal Length Lens



12mm Focal Length



Stock **#15-637** [CONTACT US](#)

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1

+

£255^{.00}

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Volume Pricing	
Qty 1+	£255.00 each
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Prices shown are exclusive of VAT/local taxes

Product Downloads

SPECIFICATIONS

General

Cw Series

Series:

C-Mount compatible with O-ring 25mm ID x2mm		Note:
Fixed Focal Length Lens		Type:
Physical & Mechanical Properties		
Fixed		Iris Option:
38.10		Length (mm):
36		Outer Diameter (mm):
0.6		Maximum Rear Protrusion (mm):
Optical Properties		
Field of View at Max Sensor Format: Horizontal: 41.0° Vertical: 31.3° Diagonal: 50.5°		
41.0°		Horizontal Field of View, 2/3" Sensor:
33.8°		Horizontal Field of View, 1/1.8" Sensor:
30.2°		Horizontal Field of View, 1/2" Sensor:
27.4°		Horizontal Field of View, 1/2.5" Sensor:
22.8°		Horizontal Field of View, 1/3" Sensor:
17.1°		Horizontal Field of View, 1/4" Sensor:
11.00		Maximum Image Circle (mm):
0.003		Numerical Aperture NA, Object Side:
7 (7)		Number of Elements (Groups):
12.00		Focal Length FL (mm):
100 - ∞		Working Distance (mm):
f/16		Aperture (f/#):
425 - 675nm BBAR		Coating Specification:
17.6208		Entrance Pupil Position (mm):
23.93		Object Space Principal Plane (mm):
1.98		Image Space Principal Plane (mm):
2.11		Maximum Distortion (%):
-11.3801		Exit Pupil Position (mm):
VS		Lens Wavelength Range:
Sensor		
2/3"		Maximum Sensor Format:
2.74		Pixel Size (µm):
Threading & Mounting		
M30.5 x0.50 (Female)		Filter Thread:
C-Mount		Mount:
Environmental & Durability Factors		
IPX7 and IPX9K		Environmental Rating:
		Storage Temperature (°C):

Type of Ruggedization:
Waterproof (IPX7 and IPX9K)

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.

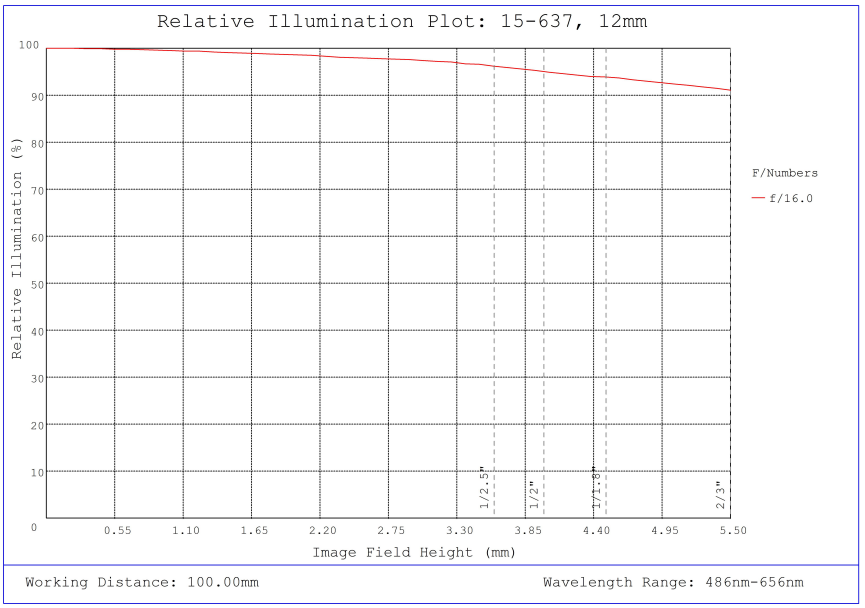
Edmund Optics has created a family of high performance optical designs (the C Series family) and developed 6 customized optomechanical solutions targeted for specific applications. These lens sub-families utilize the same optics as the C Series lenses providing the same optical performance in a variety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

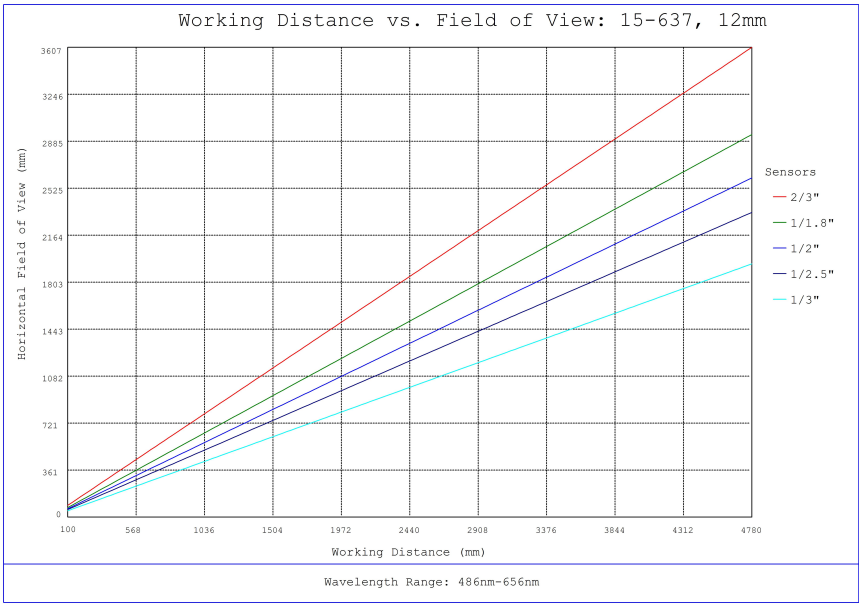
TECHNICAL INFORMATION



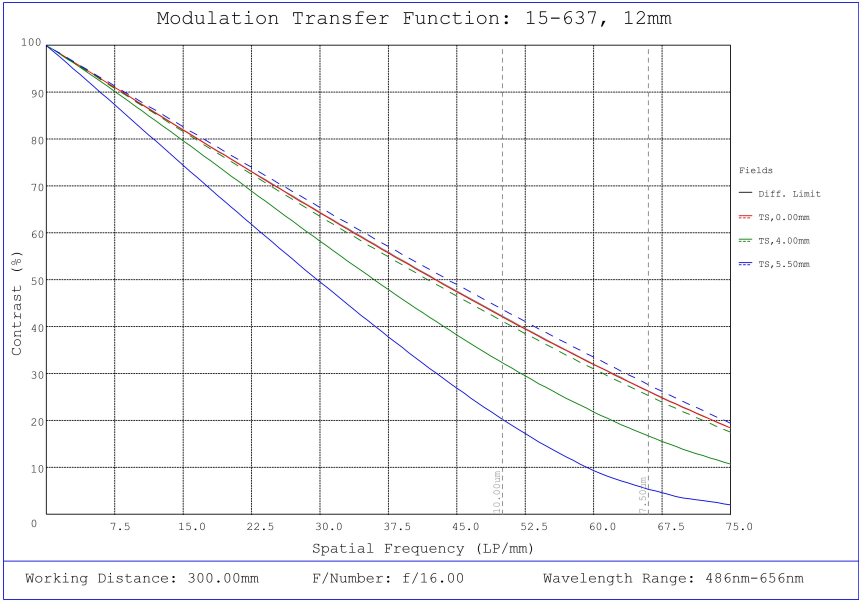
#15-637, 12mm, f/16 Cw Series Fixed Focal Length Lens, Distortion Plot



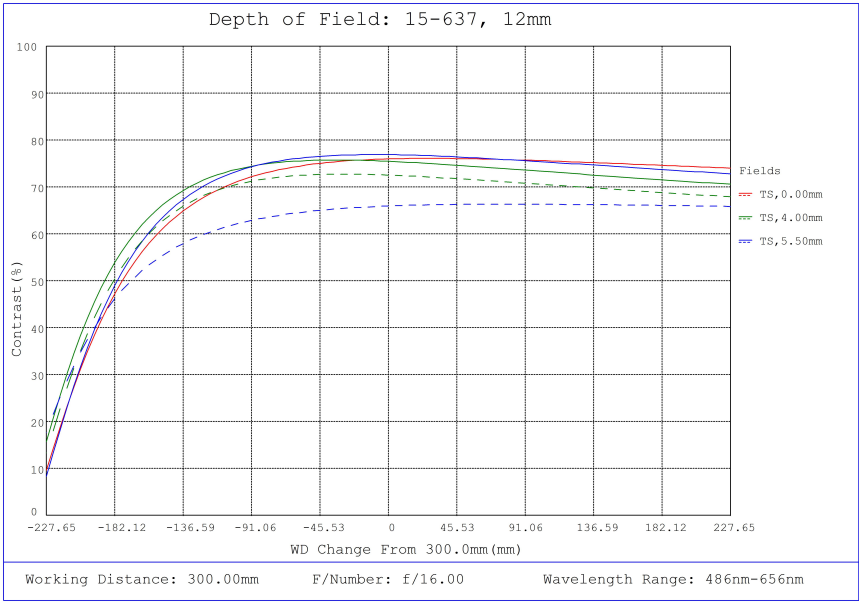
#15-637, 12mm, f/16 Cw Series Fixed Focal Length Lens, Relative Illumination Plot



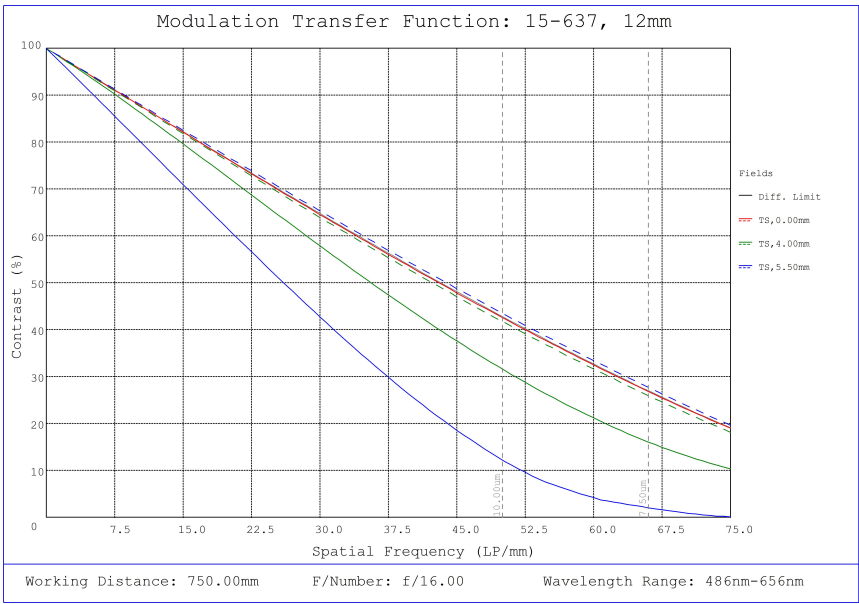
#15-637, 12mm, f/16 Cw Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



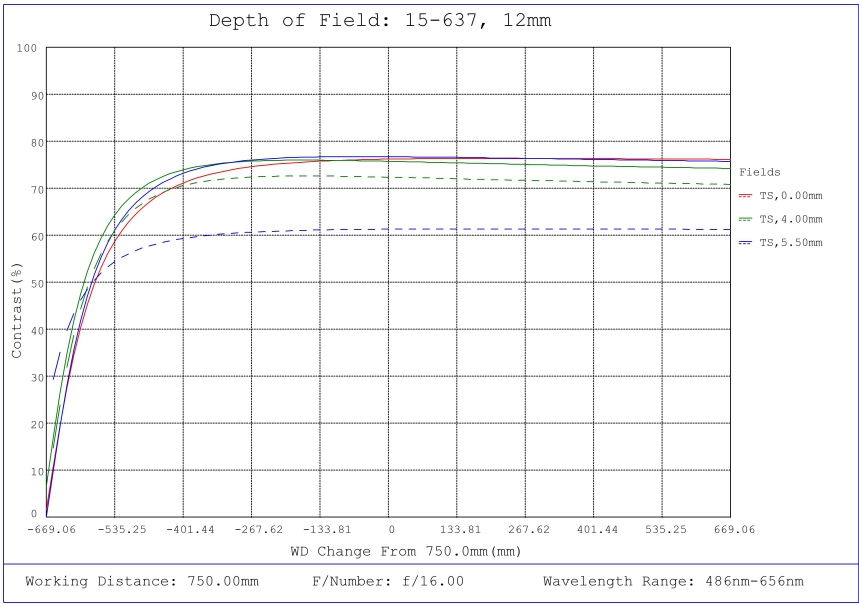
#15-637, 12mm, f/16 Cw Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 300mm Working Distance, f16



#15-637, 12mm, f/16 Cw Series Fixed Focal Length Lens, Depth of Field Plot, 300mm Working Distance, f16



#15-637, 12mm, f/16 Cw Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 750mm Working Distance, f16



#15-637, 12mm, f/16 Cw Series Fixed Focal Length Lens, Depth of Field Plot, 750mm Working Distance, f16