

TECHSPEC®

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



12mm Focal Length



Stock **#15-637** 1 In Stock

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1

+

C\$641^{.20}

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SPECIFICATIONS

General

Cw Series

Series:

Note:

C-Mount compatible with O-ring 25mm ID x2mm	
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:
-20 to +60	Storage Temperature (°C):

Type of Ruggedization:

Waterproof (IPX7 and IPX9K)

Regulatory Compliance

Certificate of Conformance:

[View](#)

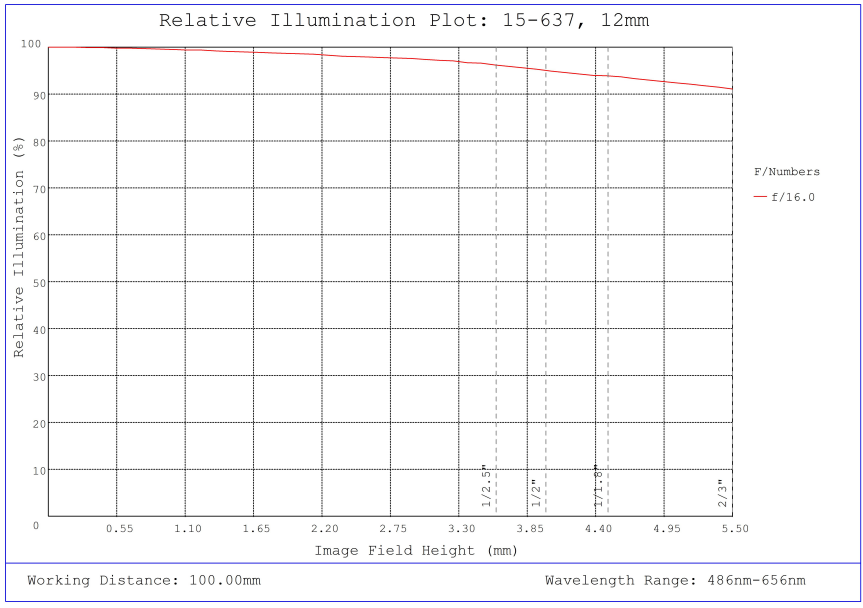
PRODUCT DETAILS

- 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 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-NR 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.

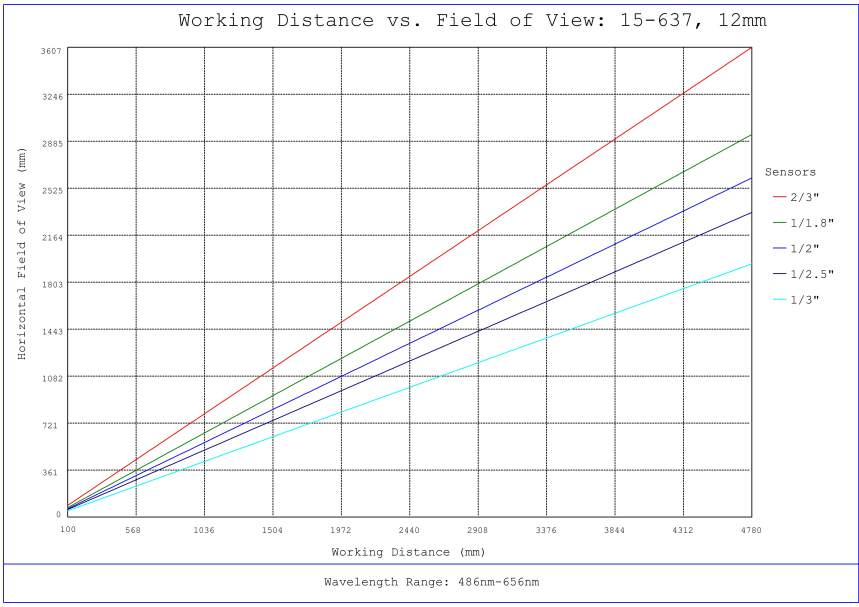
TECHNICAL INFORMATION



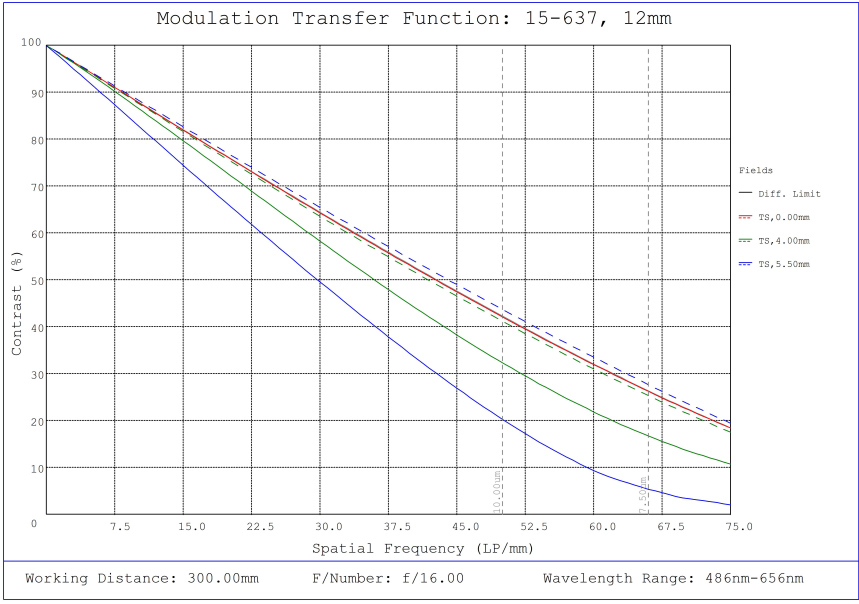
#15-637, 12mm, f/16 Cw Series Fixed Focal Length Lens, Distortion Plot



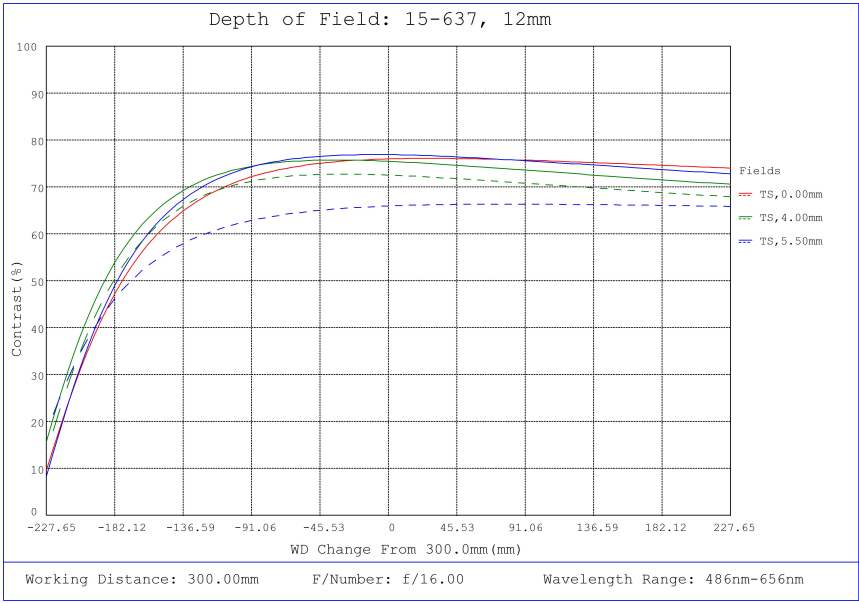
#15-637, 12mm, f/16 Cw Series Fixed Focal Length Lens, Relative Illumination Plot



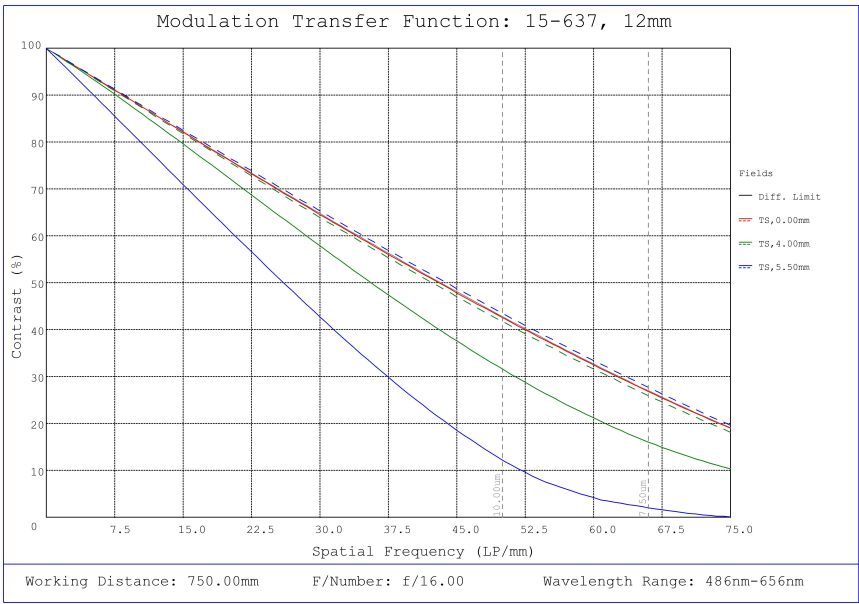
#15-637, 12mm, f/16 Cw Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



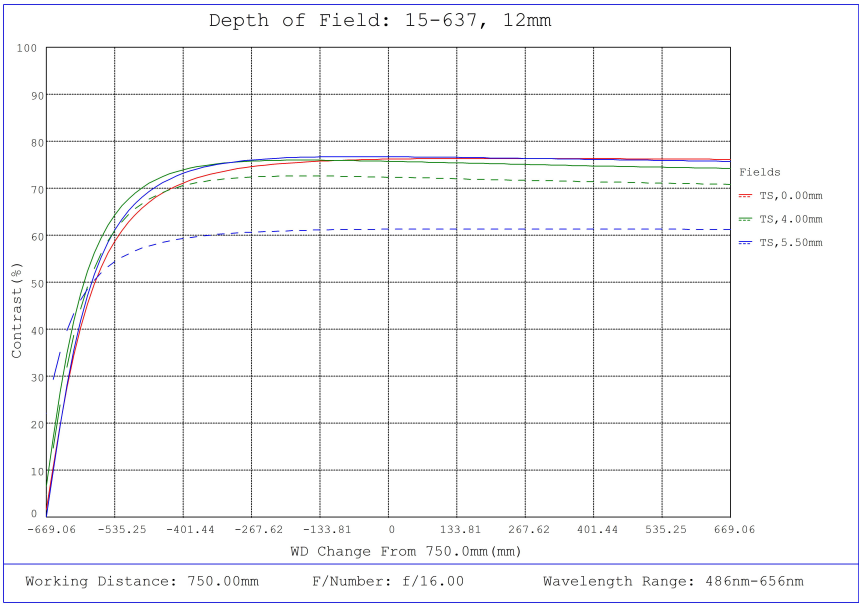
#15-637, 12mm, f/16 Cw Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 300mm Working Distance, f16



#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