

TECHSPEC®

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



12mm Focal Length



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

-

1

+

S\$325<sup>.00</sup>

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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:<br>Horizontal: 41.0°<br>Vertical: 31.3°<br>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)

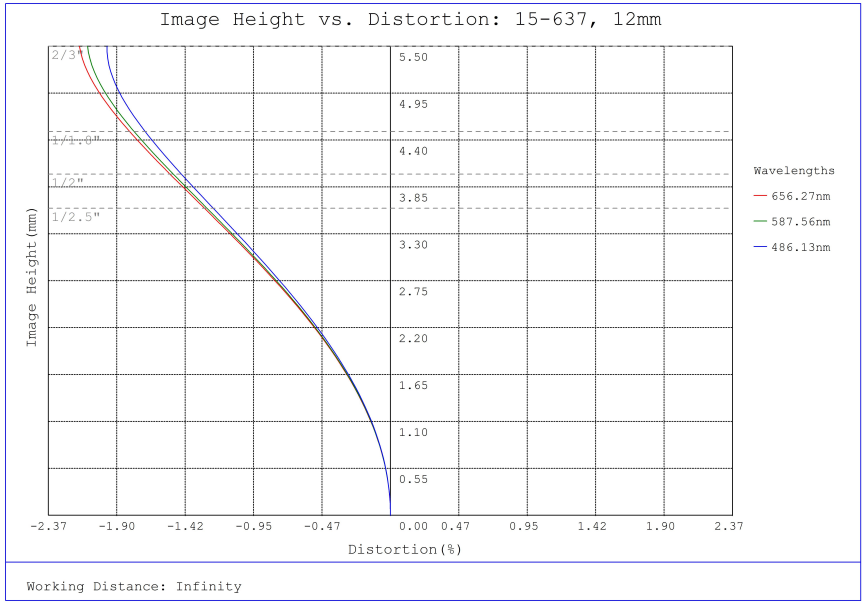
Regulatory Compliance

Certificate of Conformance:  
[View](#)

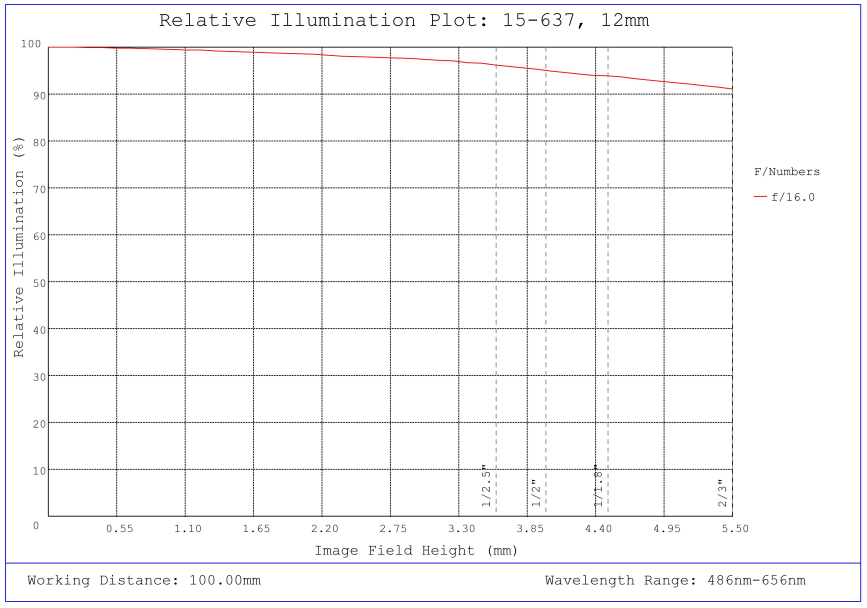
## PRODUCT DETAILS

- 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-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.

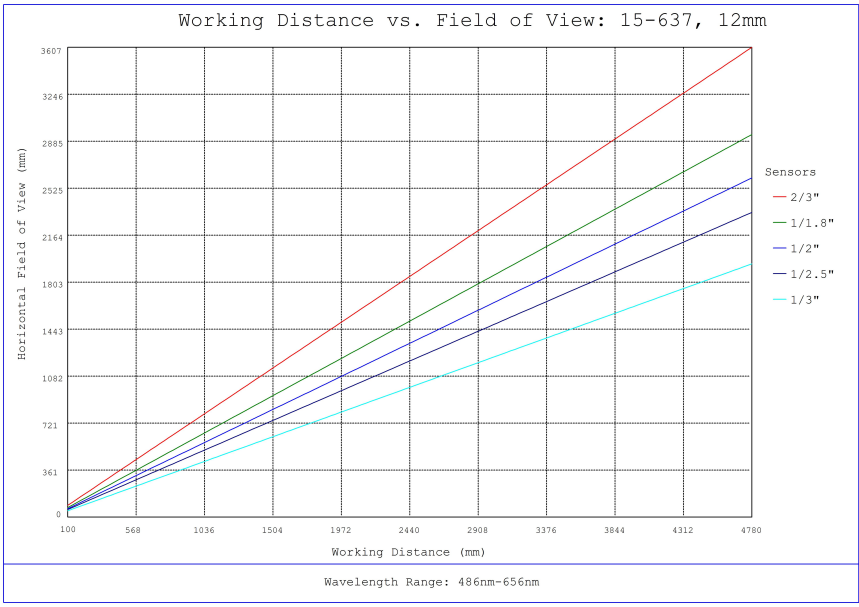
## TECHNICAL INFORMATION



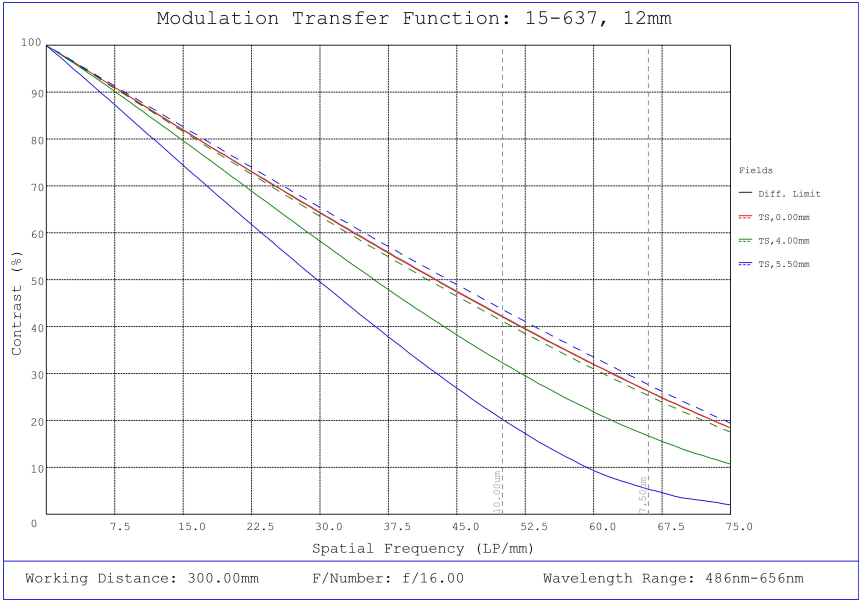
#15-637, 12mm, f/16 Cw Series Fixed Focal Length Lens, Distortion Plot



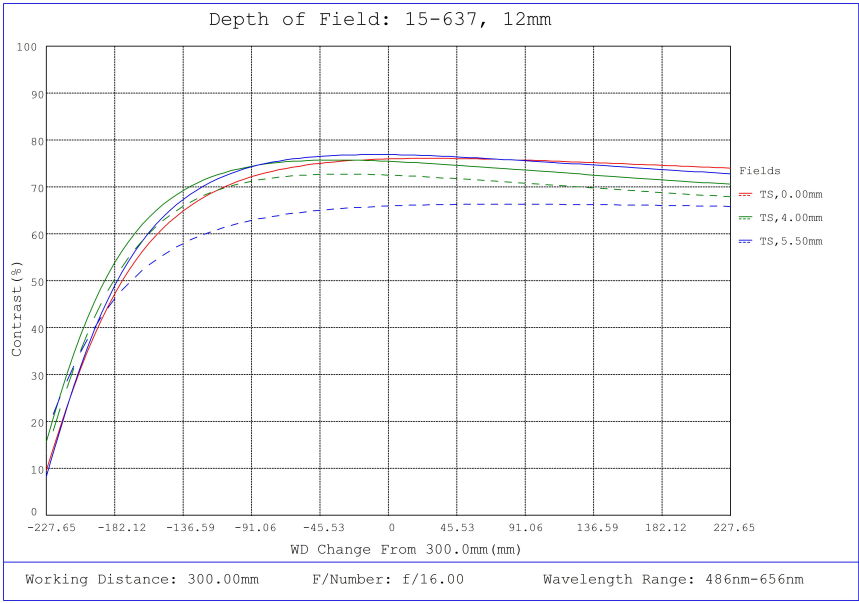
#15-637, 12mm, f/16 Cw Series Fixed Focal Length Lens, Relative Illumination Plot



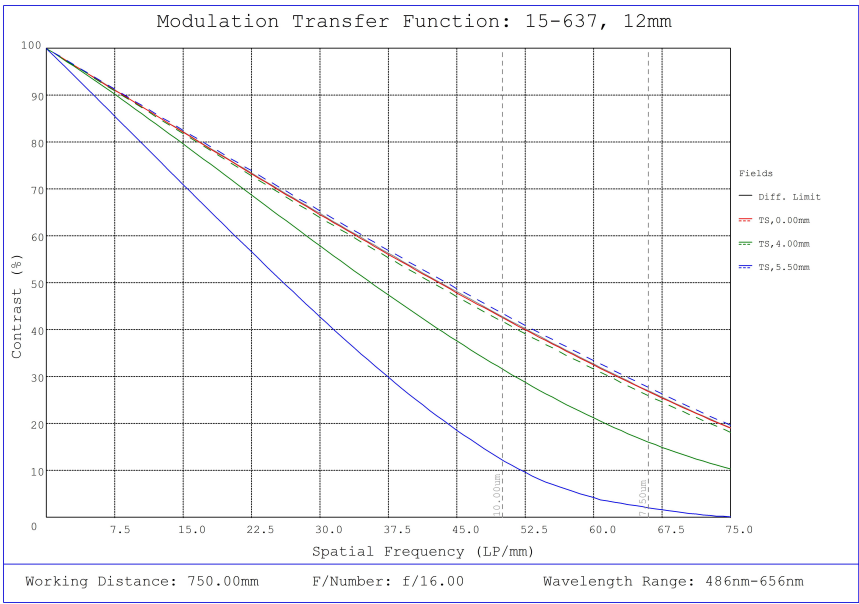
#15-637, 12mm, f/16 Cw Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



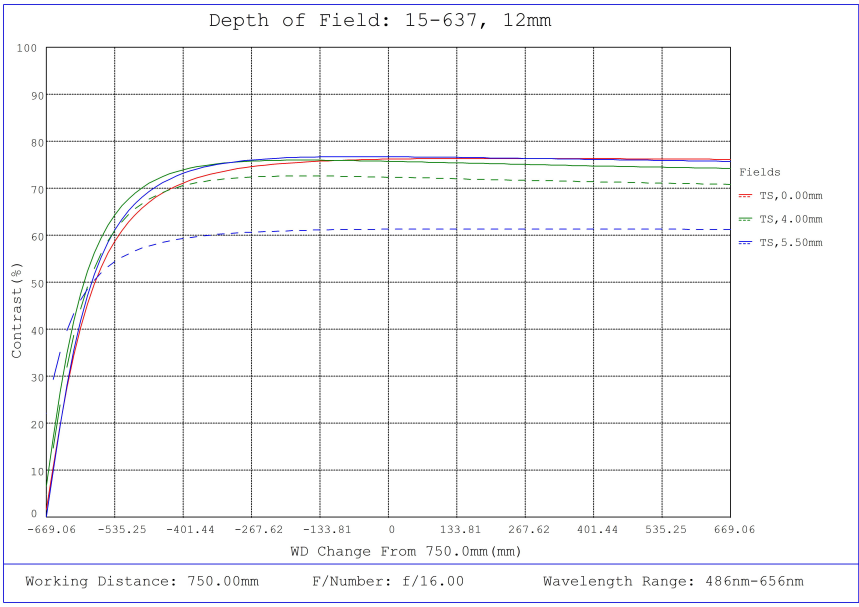
#15-637, 12mm, f/16 Cw Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 300mm Working Distance, f16



#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