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**TECHSPEC® 12mm, f/1.8 Cw Series Fixed Focal Length Lens**



12mm Focal Length



Stock **#15-631** **20+ In Stock**

⊖ 1 ⊕ €316<sup>00</sup>

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Volume Pricing	
Qty 1+	€316,00 each
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**i** Prices shown are exclusive of VAT/local taxes

Product Downloads

**General**

Cw Series **Series:**

C-Mount compatible with O-ring 25mm ID x2mm **Note:**

Fixed Focal Length Lens **Type:**

Meets IEC IPX7 and IPX9K  
Imaging 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):  
0.0262  
Numerical Aperture NA, Object Side:  
7 (7)  
Number of Elements (Groups):  
12.00  
Focal Length FL (mm):  
100 - ∞  
Working Distance (mm):  
f/1.8  
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):  
VIS  
Lens Wavelength Range:

## Sensor

2/3"  
Maximum Sensor Format:  
2.74  
Pixel Size (µm):

## Threading & Mounting

M30.5 x 0.50 (Female)  
Filter Thread:  
C-Mount  
Mount:

## Environmental & Durability Factors

IPX7 and IPX9K  
Environmental Rating:  
-20 to +60  
Storage Temperature (°C):  
Type of Ruggedization:

## Regulatory Compliance

Certificate of Conformance:

[View](#)

## Product Details

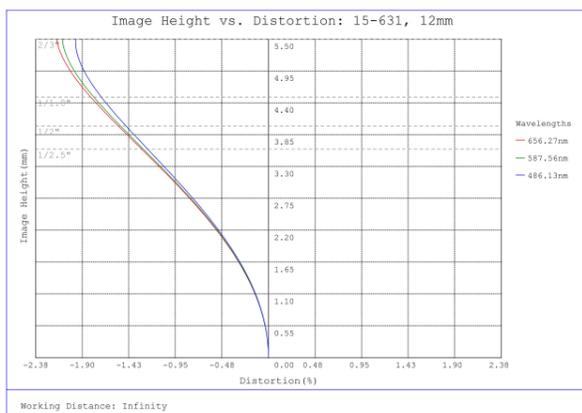
- Up to 2/3", C-Mount Lens
- Waterproof (Cw) Versions of C Series Fixed Focal Length Lenses
- Meets IEC Ingress Protection Ratings of IPX7 and IPX9K
- Designed to Eliminate the Need for a Protective Lens Cover

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.

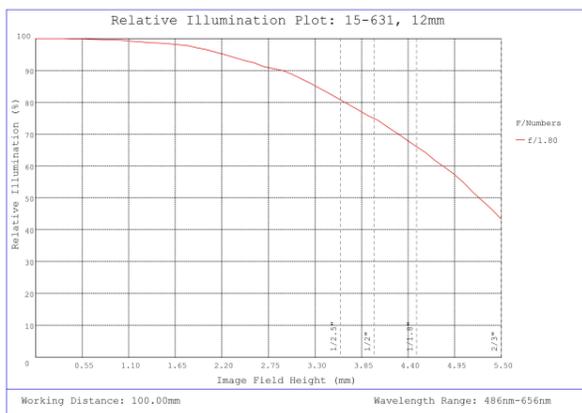
Edmund Optics has created a family of high performance optical designs (the C Series family) and developed 6 customized optomechanical solutions targeted for specific applications. These lens sub-families utilize the same optics as the C Series lenses providing the same optical performance in a variety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

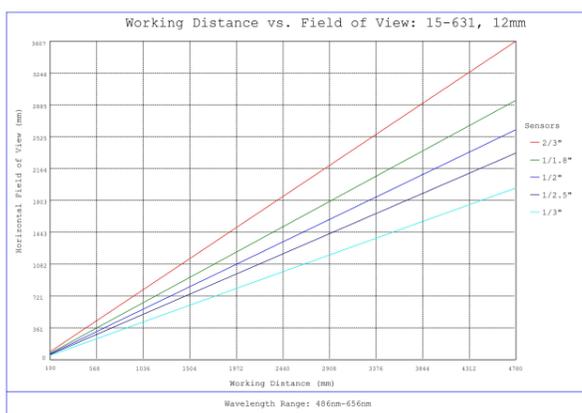
## Technical Information



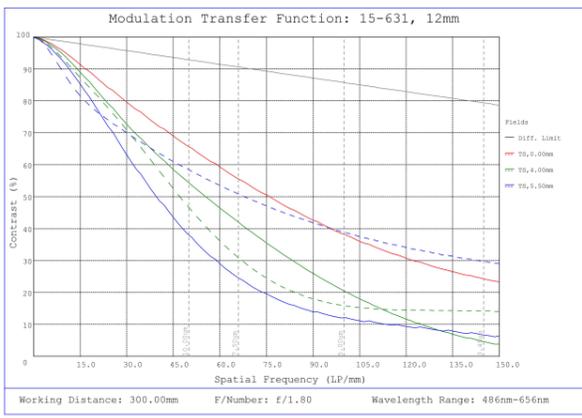
#15-631, 12mm, f/1.8 Cw Series Fixed Focal Length Lens, Distortion Plot



#15-631, 12mm, f/1.8 Cw Series Fixed Focal Length Lens, Relative Illumination Plot



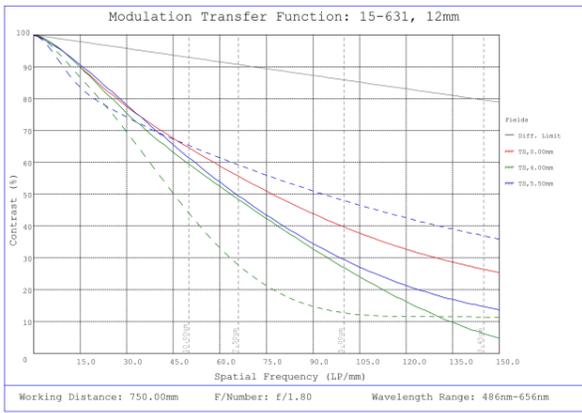
#15-631, 12mm, f/1.8 Cw Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



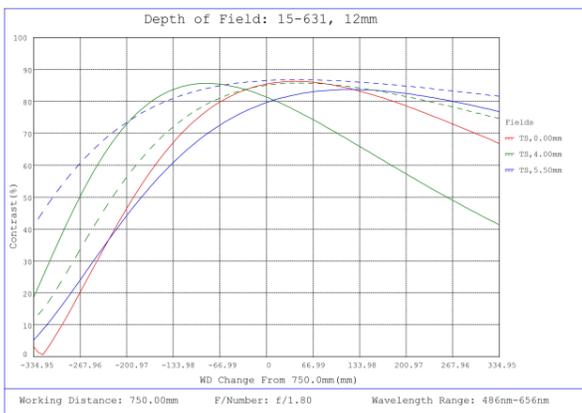
#15-631, 12mm, f/1.8 Cw Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 300mm Working Distance, f1.8



#15-631, 12mm, f/1.8 Cw Series Fixed Focal Length Lens, Depth of Field Plot, 300mm Working Distance, f1.8



#15-631, 12mm, f/1.8 Cw Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 750mm Working Distance, f1.8



#15-631, 12mm, f/1.8 Cw Series Fixed Focal Length Lens, Depth of Field Plot, 750mm Working Distance, f1.8