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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 ⊕ C\$641²⁰

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| Qty 1+ | C\$641.20 each |
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General

Cw Series **Product Family:**

C-Mount compatible with O-ring 25mm ID x 2mm **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

| | |
|---|--|
| Horizontal: 41.0° Vertical: 31.3° Diagonal: 50.5° | Field of View at Max Sensor Format: |
| 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): |
| Waterproof (IPX7 and IPX9K) | Type of Ruggedization: |

Product Details

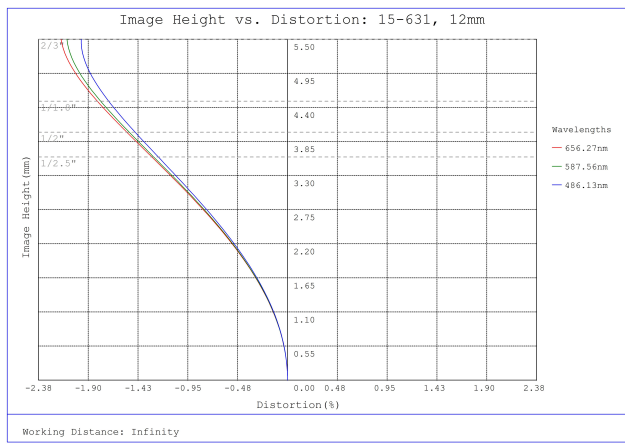
- Up to 2/3", C-Mount Lens
- Waterproof (Cw) Versions of C Series Fixed Focal Length Lenses
- Meets IEC Ingress Protection Ratings of IPX7 and IPX9K
- Designed to Eliminate the Need for a Protective Lens Cover

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.

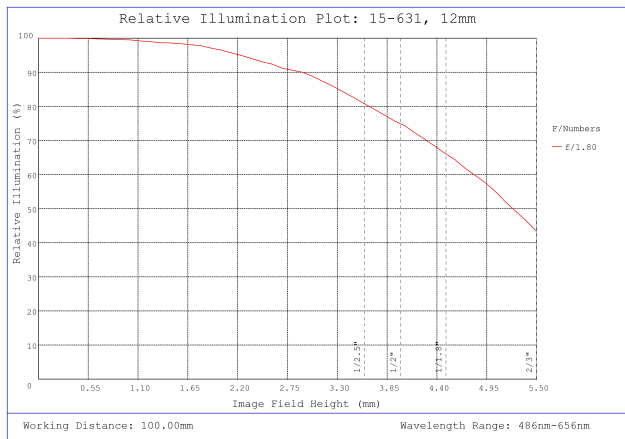
Edmund Optics has created a family of high performance optical designs (the C Series family) and developed 6 customized optomechanical solutions targeted for specific applications. These lens sub-families utilize the same optics as the C Series lenses providing the same optical performance in a variety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

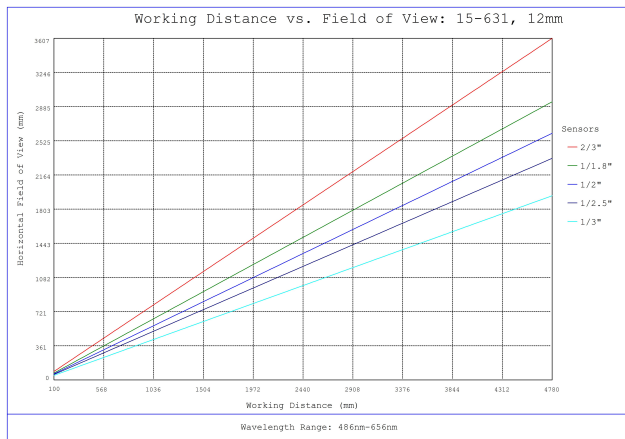
Technical Information



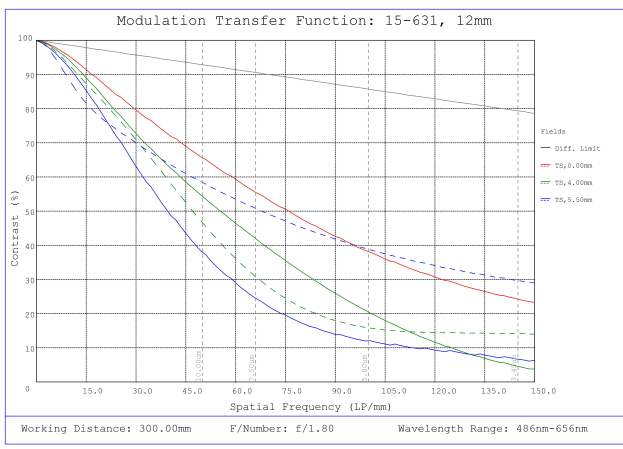
#15-631, 12mm, f/1.8 Cw Series Fixed Focal Length Lens, Distortion Plot



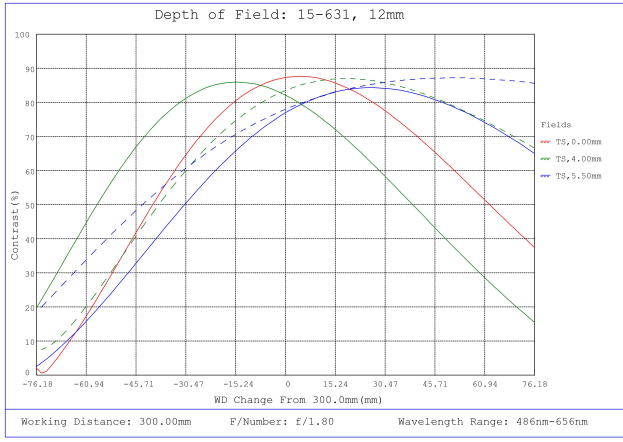
#15-631, 12mm, f/1.8 Cw Series Fixed Focal Length Lens, Relative Illumination Plot



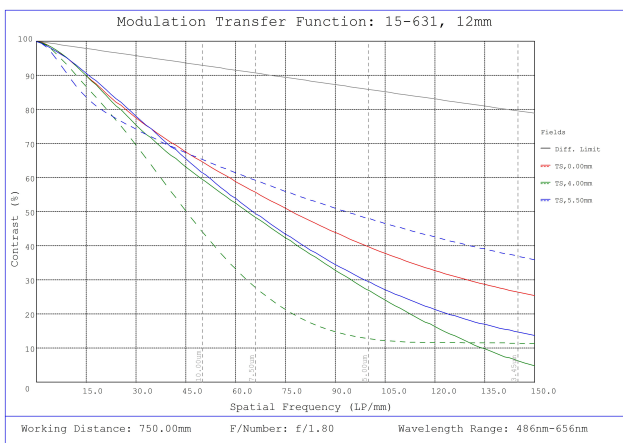
#15-631, 12mm, f/1.8 Cw Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



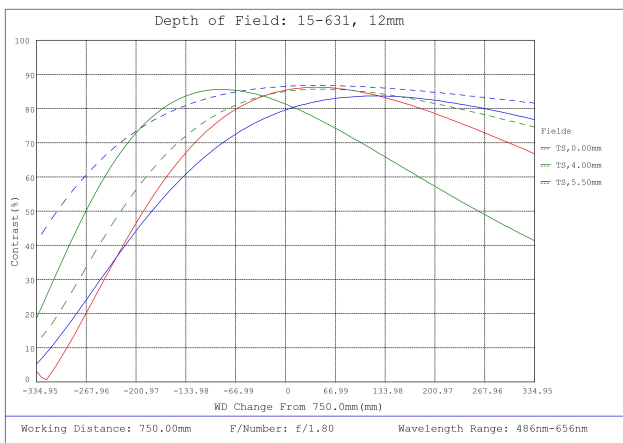
#15-631, 12mm, f/1.8 Cw Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 300mm Working Distance, f1.8



#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